HERE'S HOW YOUR PROJECT CAN -

1) build a regular off-season load

2) help members earn extra dollars

A CAMPAIGN PLAN FOR MORE ELECTRIC BROODERS IN YOUR OWN COMMUNITY

Department of Agriculture
Rural Electrification Administration
Washington, D. C.

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PLEASE NOTE!

The plan outlined here is designed to fit the requirements of most REA cooperatives, and power districts.

Because of local conditions, you may find it advisable to modify the plan at one or more points. If so, after consultation with your Board, make the changes which will improve the effectiveness of your brooder campaign, looking toward the general purpose outlined.

If there is anything about the Plan you do not understand, or on which you want more information, WRITE AT ONCE to the Utilization Division, Rural Electrification Administration, Washington, D. C.

F O R E W O R D

FOREWORD

North, south, east or west - any farmer can make good use of one or more electric brooders; likewise, the man with little or no poultry. It's the easy way for him to make a start towards producing eggs and poultry for his own and neighbors' use, or even for the open market.

For many a farmer whose total income comes from one or two cash crops, electric brooders will provide what he most needs: a few extra dollars coming in every month of the year.

Before electricity, egg and poultry raising took a lot of time; few farmers could tend their crops and have time left for raising chickens; likewise where the homemaker took care of the chickens, too much of her time was needed. But now, simple electrical devices have changed all this.

The brooder needs little attention, and it is safe. It makes it easier to brood healthier chicks, with lower mortality, and usually at a lower cost than by other methods.

Other helpful devices grind feed, turn lights on and off, keep the drinking water warm, facilitate the grading and cleaning of eggs, and do many other necessary jobs around the poultry flock. Brooders open the door to wider use of electricity - benefiting both the farmer and the cooperative. Brooders will go a long way towards making the farmer electrically minded. Your members want to know about INCOME-PRODUCING USES of electricity. Here's one of the most important, and it costs but little.

HERE'S A PLAN TO INCREASE THE USE OF BROODERS ON YOUR PROJECT

Strong, sturdy, small or weak - any farmer can make good use of one or more electric brooders. Likewise, the man with little or no poultry. This is one way for him to make a start towards producing eggs and poultry for his own and neighbors' use, or even for the open market.

For only a farmer who is local living among from one or two cows, electric brooders will provide what he most needs: a few extra dollars coming in every month of the year.

Before electricity, egg and poultry raising took a lot of time; for farmers could seed their crops and have time left for raising chickens; literally where the homemaker took care of the children, too much of her time was needed. But now, simple electrical devices have brought all this.

The brooder needs little attention, and it is safe. It makes it easier to breed healthier chicks, with lower mortality, and usually at a lower cost than by other methods.

Other helpful devices grind feed, turn lights on and off, heat the drinking water warm. Feed is the grinding and cleaning of eggs, and do many other necessary jobs around the average farm. Increase from the hour to which use of electricity - modernizing both the farm and the farmer's life. Brooders will go a long way towards making the farmer electrically minded. Your neighbors would be more about CONVENIENCE DUE to electricity. Here's one of the most important, and it costs but little.

REMEMBER A SELL TO INSTALL THE USE OF BROODERS ON YOUR PARTICULAR

DEAR MR. PROJECT SUPERINTENDENT:

This is your plan.

It's intended to help you do your job of building the load on your lines.

Maybe you've been thinking, "How can I build load when many of our members can't pay any more for electricity?

They have already about reached the limit."

The answer is: They can use an unlimited amount of electricity if it brings them added income. As long as added kilowatt hours show a profit, your members can use more.

THIS PLAN HAS BEEN TESTED, AND IT WORKS!

Last year, in every part of the country, project superintendents put this plan to work. They connected dozens of brooders to their lines. Their off-season load increased, and their members have more net income.

Furthermore, a survey of the results of last year's campaign shows an average of about 80 brooders added on those projects reporting as having put on brooder campaigns. On those projects where aggressive campaigns were started early in the season, an average of over 100 brooders were added by the projects reporting. Considering the matter from another standpoint, we find an aggressive brooder campaign usually raising the saturation above 5%; in sections already acquainted with brooders, 10 to 15%, or even more. Likewise, when the saturation for equipment climbs to between 5 and 10%, the growth in use rapidly increases and, as a result, the second year's campaign on any project

should give highly satisfactory results. If there aren't any poultry farms in your area, there is still a great need for brooders. 80% of all poultry is found in small farm flocks.

If some farmers are using old-fashioned coal or oil brooders, then there is an opportunity to replace them with new electric models.

THE PLAN WILL WORK ON YOUR PROJECT, TOO. THERE IS ROOM FOR MORE BROODERS. Every farmer can use more income. The same is true of every project.

HOW MANY BROODERS CAN YOU ADD TO YOUR LINES THIS YEAR?

VALUE OF BROODER TO PROJECT LOAD

First, a few important facts:

The widespread use of electric brooders will keep your system revenue at normal during the off-peak months: February, March, April and May. In fact, it may even put a bulge in this part of your load curve. Longer days and hard spring work send farm people to bed earlier than their city friends, so lighting load is low. The refrigeration load hasn't yet picked up to summer levels.

Every brooder you can connect will add an average of 200 kwh (from 50 to 400 kwh, depending on brooder, brooder size and climate) to the consumption of electricity during this period--an average of 50 kwh per month! 1/2 kwh per chick per season is a fair average, with good management, for brooders having capacities of 200 or more chicks. However, the winter average is close to 1 kwh and the general average per season is 3/4 kwh.

Electric brooders build daily as well as seasonal off-peak load. During the early morning hours, when temperatures are lowest, more current is used than during the early evening peak. For example, on one project with 1200 consuming members, 75 brooders added about 30 kw to the average night demand, an increase of 33-1/3%.

Chickens are hatched and brooded just at the time when your system is particularly in need of extra revenue.

You couldn't ask for a load better suited to your needs.

THE BROODER CAMPAIGN

HERE ARE THREE WAYS OF GETTING BROODERS ON YOUR LINES!

Follow the one best suited to your own local conditions.

ONE - BROODER DEALER COOPERATIVE PLAN

Many local dealers and hatcherymen will be glad to cooperate with REA systems by setting a special price on group purchases of brooders, during the period of your campaign, on any equipment he handles which meets REA Brooder Specifications. Other equipment should not be considered. They can do this without reducing their total profit, actually making more net profit than usual.

Here is why these local dealers should be and usually are glad to offer lower prices:

1) Manufacturers will give them lower prices on large orders.

2) They order what they need and get cash for all sales. There is no risk of carry-overs or heavy inventories. This cuts their cost of doing business.

3) There are no trade-ins for them to worry about. Many dealers give higher trade-in allowances than they can ever hope to realize from the old brooders.

4) They have nothing to do with financing, collections or possible repossessions; and no bad debts to write off. They get cash, and the project takes care of the financing.

5) Their sales cost is practically zero, as the cooperative members assemble the order.

6) In the case of hatcherymen, brooders are usually just a side-line, and their opportunity for greater profits comes from the continued and increasing sale of chicks. They're usually glad to see more electric brooders in use, even if their immediate profits should be lower, as it means that on the average their customers will have better success with their chicks.

Many times the dealer's profit per brooder, taking account of his lower selling costs, is not much below that normally secured. Likewise the one sale of a group of brooders to your members will probably be his most profitable brooder business during the whole year.

If you outline this pooled order plan to him, he will ordinarily be glad to handle a lot of 25 or more electric brooders at prices that represent substantial savings to your members.

Last year, for example, on two REA-financed projects, pooled orders for 46 and 152 brooders represented savings of $822 and $2,553, respectively. While these savings may be higher on the average than can be expected, they do indicate that where a real effort is made to reduce merchandising costs on brooders, members will be amply repaid for their cooperative efforts.

TWO - POOLED ORDERS TO MANUFACTURERS

There are some areas where there are no local sales outlets for brooders. Or you may find that the only local dealer handles a brooder which doesn't come up to specifications. Likewise,

we learned last year that some dealers just aren't interested in pooled order purchasing and won't cooperate.

So, if for one of these or any other good reason, you can't make suitable arrangements locally, you should get in touch with manufacturers whose equipment meets REA specifications, asking them to submit offers to sell in accordance with the forms prepared by REA, copies of which you have been sent.

You will probably find that manufacturers will give you a lower price than the local dealers. However, you will find it worth while to order from your local dealer if you can because:

1) It helps local business and will strengthen good relationships between your system and local businessmen.

2) Local dealers must accept responsibility for servicing the brooders and assisting in teaching your members how to operate them properly.

3) The local dealers will help you arrange demonstrations by lending the Brooder Committee one or more to use during the campaign. Many projects find it very effective to keep chicks under a brooder in the display window, or on the floor of the office, so that those coming in to pay their bills will see them and can ask questions.

THREE - HOME-MADE BROODERS

REA has developed plans for an entirely satisfactory brooder which the farmer himself can build at very low cost. It is an all-weather unit and can be used outside a building without shelter. It has a capacity of 125-150 chicks.

Many of your members who are handy with tools may prefer to build their own.

Plans and other details may be obtained by writing to: The Utilization Division, Rural Electrification Administration, Washington, D. C.

BY ANY OF THESE THREE METHODS YOU CAN MAKE BROODERS AVAILABLE TO YOUR MEMBERS AT CONSIDERABLY LESS THAN USUAL PRICES. AFTER MAKING SUITABLE ARRANGEMENTS BY ONE OF THESE METHODS, NEXT STEP IS THEN TO TELL YOUR MEMBERS ABOUT IT, AND SHOW THEM HOW BROODERS CAN BRING THEM EXTRA INCOME THE WHOLE YEAR AROUND.

STEP I

At the very outset, enlist the support of your County Agent.

He will be interested in brooders, because:

1) Effective use of electric service furthers his own basic objectives of better farm and home management.

2) Brooders will increase farm income.

3) Brooders are one more step towards crop diversification, in many parts of the country.

Not all County Agents are as yet entirely familiar with the superiority of electric brooders over old-fashioned coal, oil or wood-burning models. Under "Sales Points and Good Sense on Advantages of Electric Brooders," page 51, are some brooding facts which he will want to see. There are

also included on page 58, some quotations from bulletins on Electric Brooding, published by Agricultural Experiment Stations in various states.

✓ DISCUSS THE PLAN WITH THE COUNTY AGENT.

✓ GO OVER THIS PORTFOLIO WITH HIM STEP BY STEP.

✓ DISCUSS THE STEPS WHERE HIS HELP IS ESSENTIAL.

✓ ASK HIM TO GET AVAILABLE LITERATURE ON ELECTRIC BROODING FROM STATE UNIVERSITIES AND EXPERIMENT STATIONS, PARTICULARLY FROM YOUR OWN STATE.

The County Agent, if he is willing to give his support to your brooder campaign, should be asked to:

1) Serve as a member of the Brooder Committee.

2) Give publicity and support to the Campaign in his news bulletins, releases, form letters and in his personal contacts with farmers.

3) Assist you in making arrangements with dealers or manufacturers,whose equipment meets REA specifications, for pooled purchases.

4) Give his advice and help in arranging brooder demonstrations on farms, in your project office and at meetings; also talking to farmers at demonstration meetings.

STEP II

CALL A SPECIAL MEETING OF YOUR BOARD

While the chief responsibility for the campaign rests on the shoulders of the Project Superintendent, its success will, to a considerable extent, depend on how well he succeeds in getting others to do the work. He can't do it all himself.

The Board should be the power behind every major load-building operation. That's one of their chief responsibilities to the members who elected them. This is their chance to serve the members and the project well.

CALL THE MEETING, LAY THE PLAN BEFORE THEM, AND LET THEM BEGIN TO WORK IMMEDIATELY.

Here is a suggested program for the meeting:

PRESENTATION OF THE PLAN

-by you and the County Agent. In your conference with the County Agent, you should have organized this presentation. It's best for you to cover the plan itself - also the business details, letting the C.A. talk about electric brooders and what they can earn for a farmer.

If you can present the plan with enthusiasm to your Board, they are more likely to give it their enthusiastic support.

Ask for discussion and suggestions, leading up to - - - -

APPOINTMENT OF A "BROODER COMMITTEE"

The Brooder Committee is responsible for the campaign. The Project Superintendent and the County Agent work with the

Committee and its chairman, but the success of the campaign will depend on the spirit and energy of the Brooder Committee itself.

Keep the Committee small; half a dozen real cooperators is enough. They can get other members and members of the Board to help when they need assistance for special work.

For the Committee, pick real leaders. If any of your members have had successful experiences with electric brooders, they should be particularly useful on the Committee. At least one or two Board members should be included.

It's not an easy job, but there's a lot of satisfaction in it for Committee members!

On page 13 you'll find suggestions for organizing the Committee's work.

GET THE ACTIVE SUPPORT OF EVERY BOARD MEMBER

Board members are the natural leaders of your project. If they get behind this campaign, your members will respond to it more readily. Members look to the Board for leadership, so - -

Why not make sure that two or three Board members, at least, agree to purchase electric brooders at the very start of the campaign? Let their names head up the list, and others will follow.

Every Board member should talk about the campaign when they meet other members. Pass the word along!

Board members who aren't members of the Brooder Committee should nevertheless be willing to assist the Committee whenever it needs their help.

You have enlisted the support of the COUNTY AGENT!

The BOARD OF DIRECTORS has approved the campaign plans.

You've organized the BROODER COMMITTEE.

NOW

STEP III is to -

CALL THE FIRST MEETING OF THE BROODER COMMITTEE.

Go over this portfolio with them in detail.

You will find many suggestions in the following pages for dividing responsibilities, for publicity and for special meetings and demonstrations. All of these can be adapted to your own conditions.

As Project Superintendent your chief responsibility is to see that the Brooder Committee takes charge of the campaign and handles it effectively.

They will need your help, but that doesn't mean that they should rely on you for every detail of the work. This campaign is their responsibility. Let them take the lead.

FIRST MEETING OF THE
BROODER COMMITTEE

Members: one or two Board members;

members who have used electric brooders, or who raise poultry;

other hard-working, capable members of the project;

the County Agent (ex officio);

the Project Superintendent (ex officio).

Responsibilities

Each member of the Brooder Committee should have a specific job to do. Several members can take charge of the various duties; others can work along with them as assistants. They should all be responsible to the Chairman of the Brooder Committee.

HERE ARE SOME OF THE JOBS TO BE DONE:

1) Brooder Selection

The member in charge of this work will contact every electric brooder dealer, in the area covered by your electric system, who handles electric brooders meeting REA specifications.

Likewise, he should only consider equipment for which the dealers supply the manufacturers guaranteed operating characteristics, as requested of manufacturers wishing to qualify under REA specifications. (See pages 25-27.) The brooder selection chairman is charged with the responsibility of looking after the best interests of his fellow members (as well as himself) and in no other way can he be sure of getting the actual overall operating efficiencies and costs upon which he must depend in making his selection.

If it becomes necessary to deal directly with manufacturers, this member will also take charge of these negotiations.

This member, with whatever assistance he needs will, if possible, confine his selections to one or two brooders, and be prepared to recommend these brooders to the membership. (See also Brooder Evaluation, pages 48-50)

IMPORTANT! IN EVERY CASE ALL BROODERS WHICH ARE TO BE FINANCED BY REA FUNDS MUST MEET REA BROODER SPECIFICATIONS.

2) Solicitation

The committeeman in charge of solicitation will organize a committee of members and Board members to visit, personally, every member on your lines.

The members of this Solicitation Committee will tell each project member the complete story of the advantages of electric brooding, and how it means extra income to most farmers. They should have leaflets and other material to help them tell this story.

Members of this committee will solicit orders and collect a down payment whenever possible. When enough down payments have been collected, you will have your first pooled order.

Committee members will issue receipts for all money, keep records of the receipts, and turn over the records and payments to the Committee chairman, or to the regular Finance Committee of the Board of Directors.

Committee members will also collect requests for financing of brooder purchases, and turn these signed requests over to the Finance Committee. Sample forms have been sent to you. (See also Form B-6, page 42)

3) Demonstrations

Demonstrations and brooder meetings will usually prove to be one of the most effective ways of acquainting members with the advantages of electric brooding and getting orders. One member of the Brooder Committee should be responsible for these meetings, with as many members to help him as he will need.

If your system is one of those which covers a large area, it may be a good idea to get one person from each section to work with the committeeman in charge of demonstrations.

Satisfactory meeting places must be located, dates arranged and a program planned. Probably the best place, by a substantial margin, for such a meeting would be the home of an enthusiastic user, conveniently accessible, where those attending could see a brooder in actual operation and ask the owner questions.

Announcements should be made up and distributed to all members urging them to attend the meetings and demonstrations.

Manufacturers' or dealers' representatives, the County Agent, and in so far as possible REA Utilization Representatives and other persons fully familiar with electric brooding should be ready to give talks and instructions at these meetings.

Every effort should be made to obtain one or more brooders for actual operation. If you have already selected the brooders you are going to recommend, get these for the demonstrations.

4) Research

If possible, have one committee member take charge of getting all possible facts on electric brooding.

His first important job is to get in touch with every farmer in your areas who has been using an electric brooder. Find out what his experiences have been, and his operating costs. This information, along with the manufacturer's guaranteed operating characteristics previously mentioned (Page 14), will help you in selecting the brooders you will recommend to your members. It will likewise help provide material for bulletins and other educational releases.

Also are there special brooding problems and requirements in your territory? The research committeeman will find out and report.

The research committeeman should take charge of getting out the Electric Brooder QUESTIONNAIRE, and preparing from the replies a list of immediate and prospective purchasers of electric brooders.

(A suggested questionnaire will be found on page 19.)

5) Literature and publicity*

Informative literature, promotional leaflets, sales letters - as well as newspaper stories and radio broadcasts - are important helps in getting orders for brooders.

One committeeman should take charge of securing such material and see that it is properly distributed.

Order a supply of the REA brooding leaflet "New Profits from Simplified Brooding." A copy can be sent to every member.

Order a supply of State Extension Service or State Agricultural Experiment Station bulletins on electric brooding. The County Agent can get enough copies of these publications for distribution to your membership, or if preferable you can take excerpts from them for use in your own literature. The Extension Service of some states has especially suitable material already available.

If your system issues a regular bulletin, its next issue might well be a special edition on electric brooders. Tell the story of the campaign,

* See also appendices III, IV, and V.

give names of the members of the Brooder Committee and run a few interesting items about brooders; also give a list of users in the area.

From time to time, news about the progress of the campaign should be sent to project members, either in the bulletin or in special mailing pieces.

The brooder campaign is important to the people of your community, and the local newspaper should be willing to get behind it. Tell the story to the editor, keep him supplied with up-to-the-minute information and it is probable that he will give you editorial support. Many editors want operating experience stories, from their circulating areas, that are of general interest. Your efforts will be well repaid if you see that he is regularly supplied. Even with but few electric brooders as yet in use, you can find something of interest to him.

He will be interested in the names of those who are active in the campaign, in information on how brooders will increase local income, in the campaign plans and in the special meetings and demonstrations you will conduct.

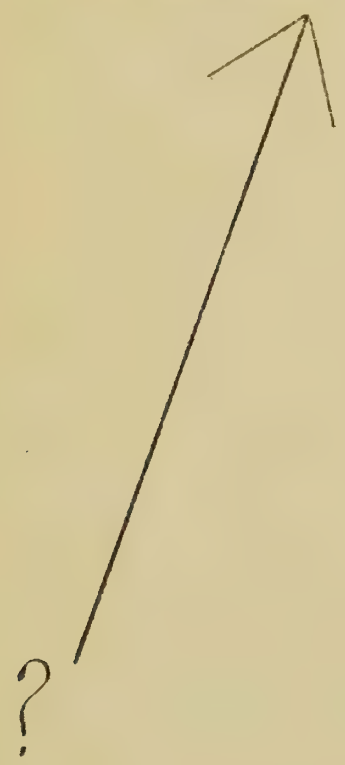
If there is a radio station which serves your locality, you may be able to arrange one or more short broadcasts on the brooder campaign. For example, in one locality that came to our attention last year, local hatcheries had regular weekly programs, one of them daily. At least once per week, they devoted the time justified to brooding, as electric brooders properly operated mean better satisfied customers. The noon hour was probably the most favored time for broadcasts. Also have interviews over the radio with enthusiastic users, particularly if these users are local leaders. You can have them answer the questions that you are most frequently asked when canvassing for brooder orders. Likewise, if you have fifteen minutes and wish to discuss the progress of the campaign, don't put on a single speaker; have three or four speakers each on a different aspect of the drive. Arrange for some cross-discussion between the speakers, or have the chairman put questions to each speaker for answering.

IF ALL OF THESE JOBS ARE WELL DONE, YOUR BROODER CAMPAIGN CAN BE A BIG SUCCESS. THAT MEANS BENEFITS FOR THE PROJECT, THE MEMBERSHIP AND THE COMMUNITY AS A WHOLE. IT OPENS THE DOOR TO WIDER USE OF ELECTRICITY ON THE FARM.

The time to begin this campaign is NOW, just before the start of the year's biggest brooding season.

It's a challenge to every Project Superintendent and to every Board of Directors - -

HOW MANY MORE BROODERS WILL GO ON YOUR LINES THIS SPRING?



BROODER QUESTIONNAIRE

SUGGESTED QUESTIONNAIRE TO BE SENT TO

EVERY MEMBER BY RESEARCH COMMITTEEMAN

Farmers all over the country are reporting substantial savings and excellent results with Electric Brooders. A campaign to get Electric Brooders for our members at a substantial reduction in price is under way. REA specifications for brooders assure you of reliable equipment and REA financing makes it possible for everyone to have at least one, letting it pay for itself.

THE ONLY CHARGE IS STRAIGHT INTEREST, AS ON WIRING LOANS.

Your answers to these questions will assist us greatly in promoting this important cooperative effort. PLEASE INDICATE THE CORRECT ANSWERS BY CHECK MARKS, OR BY OTHER SUITABLE MEANS, AND RETURN THIS FORM

-- RIGHT NOW!

Board of Directors

FILL IN BY CHECKING OR INDICATING THE CORRECT ANSWER

1) I now brood (chicks) (turkeys) with an (oil) (wood) (coal) (electric) brooder or (none).

2) I (have) (have not) had experience with electric brooding.

3) If I can get a good electric brooder at a saving of 20% to 30%, I will be interested in buying_____(how many?) electric brooders.

4) If I bought an electric brooder, I would (pay cash) (finance purchase through the Co-op).

5) Send me information on comparative costs and other advantages of electric brooding. ( )

(Signed)_____

(Address)_____

USE DOUBLE POSTCARD. EASY TO USE. INSURES MAXIMUM RESPONSE.

BROODER SPECIFICATIONS

APPENDIX I (Pages 20-29)

SPECIFICATIONS APPROVED BY THE RURAL ELECTRIFICATION ADMINISTRATION OF UNITED STATES OF AMERICA FOR HOVER TYPE ELECTRIC POULTRY BROODERS

General:

Minor variations in the details of these specifications will be permitted where they are necessary to permit the furnishing of standard equipment, provided that the Utilization Division, REA, is notified and approves the equipment as being equally suited to the intended use.

The brooder shall be of sturdy, durable construction, capable of enduring many seasons of use under normal operating conditions. The design of parts and the planning of the assembly shall be in accord with approved brooding practices so as to make the finished product an effective, easily operated, reliable brooder. The Utilization Division shall be the sole judge in determining whether any equipment in question is satisfactory in the respects, specified in this paragraph.

These specifications are divided into two sections: Section A, Structural Specifications; and Section B, Performance Specifications.

SECTION A - STRUCTURAL SPECIFICATIONS

The brooder parts shall be made to standard gauge, and where possible like parts shall be interchangeable.

Brooders which have areas of 1,000 square inches or more beneath the hover shall be equipped with the following features: thermostatic temperature control; some means of adjusting the height of the curtain above the floor; pilot light; attraction light; a method of conveniently inspecting the chicks (in not less than 1/2 of the hover area) without looking under the curtain or raising the entire brooder; a Fahrenheit thermometer; and a curtain on the outer edge of the hover.

Brooders which have areas of less than 1,000 square inches beneath the hover must have the above features with the exception of a special means of inspecting the chicks.

(1) Thermostatic Temperature Control

The thermostatic unit shall be so designed and constructed that required adjustments can be conveniently and quickly made from outside of the brooding area proper.

At any setting (temperature) within the brooding range the thermostatic unit shall so control the temperature differences at its immediate location, that the total range is not greater than 4° F. between the on and off cycles. Furthermore, the thermostat shall so control the temperature at any given point within the area extending from the center to within 6 inches from the outside of the brooder that the variation at that point is not greater than 10° F.

The thermostatic switch shall be of the "quick make and break" type and be so constructed as not to cause radio interference. The thermostatic switch shall be guaranteed for 100,000 trouble free operating cycles ("makes" and "breaks").

(2) Heating Element

Open wire heating elements shall not operate at average temperatures greater than 1,000° F. and these elements shall be iron-nickel-chromium alloy with not more than 25% iron and not less than 14% chromium. Closed types of elements may operate at temperatures as high as 1,200° F.

(3) Insulation

All insulation shall be adequately protected from destruction by the chicks, or from other causes, by its position, its composition, or by a protective covering.

(4) Sheet Metal

The metal used in the hover proper shall be from at least class C sheets, not lighter than 26 gauge-coated on both sides with $1\frac{1}{4}$ ounces of zinc per square foot of area, in accordance with Federal Specifications QQ-I 696 Iron and Steel Sheet, Black and Zinc coated (Galvanized).

(5) Thermometer

The thermometer shall be accurate within 2° F. of the actual temperature and when the thermometer is in place the bulb must be not less than 6 inches from the outside edge of the hover.

(6) Brooder Legs

Where the brooder is not so designed and built as to permit the convenient and ready use of a counterweight for controlling the height of the brooder above the floor, the legs shall be easily adjustable so that the bottom of the curtain can be raised 3 inches or more above the floor and can be lowered in steps of not more than 1 inch,

until the bottom of the curtain is $\frac{1}{2}$ inch from the floor or litter, (flush with floor or litter if curtain is scalloped). Where a brooder is so constructed that there is ample head room for the entire brooding period, (at least 8 inches, before any litter is in place and without any blocks under the legs), the brooder leg requirements will be considered as met if the curtain can be easily given equivalent adjustments in height without, at the same time, leaving undesirable gaps through the curtain.

(7) Curtain

All porous material used for curtains shall have a weight of not less than 6 ounces per square yard and all free edges shall be bound. If rubberized materials are used they shall be so made that they will not be seriously damaged by persistent picking.

(8) Fan Motors

When fans are used the motors shall be totally enclosed (dust tight). When the fan is operating continuously the temperature of the motor shall not rise a maximum of more than 50° C. (90° F.) above the ambient temperature. The motors shall not require lubricating more than twice a year.

(9) Wiring and Electrical Equipment

All electrical equipment and materials used shall be listed as approved by the Underwriters Laboratories, Inc., or carry the Underwriters Laboratories label.

(10) Wood

All wood used in the construction of the brooder shall be well seasoned, kiln dried and free of knots.

All wooden parts shall be so protected by fire resisting materials that with the brooder in continuous operation they will not reach temperatures of such height as to represent a fire hazard.

SECTION B: PERFORMANCE SPECIFICATIONS

This section of the specifications applies only to those brooders which have areas of 1,000 square inches or more beneath the hover. Actual operating data, "Guaranteed Operating Performance" shall be available upon request for all models and sizes of brooders (1,000 sq. inches or more). See pages 25-29.

The performance tests hereinafter specified are for the purpose of determining the energy consumption and the litter drying capacity of each brooder. The Rural Electrification Administration or its agents shall have the right to test any brooder allegedly complying with these specifications and to select stock equipment at random for test purposes.

Testing Conditions

In making energy consumption tests the brooder shall be operated on an auxiliary floor of 1/2" insulating board (heat transmission factor of not more than 1/3 BTU per hour, per inch thickness, per square foot, per degree F. difference in temperature). A 2-inch layer of medium-fine planer shavings shall be used as litter. Suggested directions for making tests and a list of equipment needed will be found in "Test Directions," annexed hereto (p. 28.)

Chick Capacity

Operating data for energy consumption on the basis of tests with or without chicks may be submitted. Where the test with chicks is used ten square inches of hover area is to be allowed each chick.

Wattage

Each brooder shall have sufficient wattage that under the designated operating conditions (with chicks) the heating unit will not be "on" more than 75% of the total operating time. The operating time for the "without chicks" test shall not exceed 90% of the total. (See below.)

Energy Consumption

With the correct number of chicks (not over 3 days old), with the bottom of the curtain 1/2" above the litter, (flush with litter if curtain is scalloped) and with the room temperature at 32° F. (tolerance of 2° F. plus or minus) the brooder shall be able to maintain an average (integrated or weighted) temperature of 95° F. (tolerance of 2° F. plus or minus) 2-1/2" above the litter, within the area extending from the center to within 6 inches from the edge of the brooder. In every case the temperatures are read at the highest point, just as the thermostat goes "off." The distributed temperature should be such that all of the hover area to at least within 6 inches of the outside edge is comfortable to the chicks as

shown by their even distribution over the entire area. In maintaining the above average the temperature must not vary more than 15° F. plus or minus from the average temperature within the area 6 inches from the outside edge of the brooder. On the basis of these conditions the energy requirements determined for equipment shall be submitted as watt hours per 24 hours per 100 square inches of hover area, together with the percent of total time the thermostat was on (see Chart No. 1, "Guaranteed Operating Performance," page 25). Instead of making the tests in a room at 32° F.,optionally an average may be made between the watt hours per 24 hours per 100 sq. in. of hover area, and the percent of time the thermostat was on, as determined by operating the equipment for equal periods in rooms at temperatures of 50° F. and 14 F. respectively.

"Underheat,""Heating Pad," and any other types of brooders for which the temperatures suitable for chicks not over three days old (when measured as outlined under "Energy Consumption") are not in accord with the requirements above, shall be operated in whatever way necessary to meet space, comfort, and other above-designated conditions, as outlined and guaranteed by the manufacturer. There will be no difference in the method of considering energy requirements. Tests of these types of brooders must be made with chicks.

Without Chick Tests

Tests without chicks shall be made as set forth in Chart No. 2, "Guaranteed Operating Performance," page 26.

Ventilation Test

The weight loss (moisture) in ounces per 100 sq. in. per hour during an 8-hour run shall be given with the following conditions maintained:

A room temperature of 55° F. (tolerance of 5° F. plus or minus); a relative room humidity of not less than 90%; an average (weighted or integrated) brooder temperature of 90° F., (tolerance of 2° F. plus or minus) within an area 6" from the outside of the brooder; the curtain at a height of 2" above an auxiliary floor of 1/2" insulating board, (heat transmission factor not more than 1/3 BTU per hour, per inch thickness, per square foot, per degree F. of temperature difference); and with 25 to 30% of the floor beneath the hover covered with evenly spaced 2" deep 10" square pans filled snugly level full with medium-fine planer shavings containing 200 to 225% moisture (percent moisture calculated on a dry weight basis).

CHART I GUARANTEED OPERATING PERFORMANCE, Brooder with Chicks

Testing Requirements.

1. Temperature of testing room 32° F. (tolerance of 2° F. plus or minus) (1)
2. Auxiliary floor above and directly on test room floor - 1/2" insulating board. (heat transmission factor not more than 1/3 BTU per hour, per inch thickness, per square foot, per degree F. of temperature difference).
3. Two inches of litter, medium-fine planer shavings, on auxiliary floor.
4. Brooder height: bottom of curtain 1/2" above litter (unless curtain of such design that it requires a different setting.)
5. Average (integrated or weighted) temperature of brooder 95° F. (2)
6. Allow 10 sq. ins. of hover area per chick, no chick over 3 days old being used.

(All tests are to be continued for two or more hours after required temperatures are attained and operation stabilized.)

Note: Indicate Voltage During Test.

Model	Dimensions	Hover area	Wattage		% of time heating element was on	Calculated watt-hr. consumption per 24 hrs. per 100 sq. in.	Brooder thermometer reading	Actual weighted or integrated temp.
			Element	Total				

(1) Optionally, tests can be made for equal periods in rooms at 50° F. and 14° F. and averaged, instead of using data obtained in a room at 32° F.

(2) Chicks must be comfortable as shown by their actions and even distribution through hover area, extending to within not less than 6" of the outside edge.
At any point within the area 6" from the edge of the hover the variation from the average temperature must not be greater than 15° F. plus or minus.
All temperature readings are taken at the highest point, just as the thermostat goes off.

CHART II GUARANTEED OPERATING PERFORMANCE, Brooder Without Chicks.

Testing Requirements.

1. Temperature of testing room 32° F. (tolerance of 2° F. plus or minus) (1)
2. Auxiliary floor above and directly on test room floor - 1/2" insulating board. (heat transmission factor not more than 1/3 BTU per hour, per inch thickness, per square foot, per degree F. of temperature difference).
3. Two inches of litter, medium-fine planer shavings on auxiliary floor.
4. Brooder height: bottom of curtain 1/2" above litter (unless curtain of such design that it requires a different setting.)
5. Average (integrated or weighted) temperature, of brooder 95° F. (2)

(All tests are to be continued for two or more hours after required temperatures are attained.)

Note: Indicate Voltage During Test.

Model	Dimensions	Hover area	Wattage		% of time heating element was on	Calculated watt-hr. consumption per 24 hrs. per 100 sq. in.	Brooder thermometer reading	Actual weighted or integrated temp.
			Element	Total				

(1) Optionally, tests can be made for equal periods in rooms at 50° F. and 14° F. and averaged, instead of using data obtained in a room at 32° F.

(2) Allowable variation from average temperature, at any point within 6" from edge of hover, 15° F. All temperature readings are taken at the highest point, just as the thermostat goes off.
(See also top of page 24)

CHART III

GUARANTEED PERFORMANCE

Brooder Ventilation

(1) Conditions

1. Room temperature 55° F. (tolerance 5° F. plus or minus)
2. Relative humidity not less than 90° F.
3. Auxiliary floor of 1/2" of insulating board (heat transmission factor of not more than 1/3 BTU per hour per inch thickness per square foot per degree difference.)
4. Brooder curtain 2" above auxiliary floor. (Equivalent heights for special types of curtains.)
5. Average or weighted brooder temperature - 90° F. (Tolerance 2° F. plus or minus.)
6. 25 to 30% of the floor beneath the hover covered with evenly spaced 2" deep by 10" square pans snugly level full with medium-fine planer shavings containing 200 to 225% moisture.
7. Test to run 8 hours after operation becomes stable.

Note: Indicate Voltage During Test

Average % moisture at start of test	Average % moisture at end of test	Average or weighted relative humidity		Actual Length of test	Average loss of moisture in ozs. per 100 sq.ins. per hr.
		In room	under brooder		

TEST DIRECTIONS

All tests are to be of at least two-hour duration, and the time measured to the nearest minute. After the desired average temperature (weighted or integrated) is attained and operation has become stable, other required conditions having been met, the test can begin. In determining temperature distribution,thermometer bulbs or thermocouple junctions (as the case may be) are mounted 2-1/2" above the litter and distributed across the longest dimension of the hover at intervals of not more than six inches. If the heat distribution under the hover is not laterally such that the measurements lengthwise give the average or weighted temperature, the distribution must of course also be determined across the short dimension.

Suggested instruments for making tests:

r 1. KWH meter - right hand dial to read in hundreths

2. Clock - or time measuring device

3. Potentiometer and thermocouples, or standard thermometers.

4. Hygrometer

During the actual test see that all chicks are kept under the brooder, by keeping the room dark or by other suitable means. Likewise, a suitable barricade should be placed around the outside of the brooder so as to prevent drafts and unnecessary heat losses. Such a barricade should be kept within 8 to 18" of the hover perimeter.

Kwh readings should be accurate to at least the first decimal.

Suggested TEST RECORD

Test No.	Brooder Model	Total time of test (1)	Total time heating element was on (1)	Total watt-hr. consumption during test	Temperature by brooder thermometer (2)	Actual integrated or weighted temp. (2)	No. of Chicks.

(1) Measured to nearest minute

(2) Unless accurate recording thermometers are used, readings will have to be taken all through each test. In this way procedure can be checked and the data for the charts supplied.

INSTRUCTIONS AND FORMS

FOR

GROUP PURCHASING

January 15, 1940

APPENDIX II
(Pages 30-50)

INSTRUCTIONS TO REA BORROWERS CONCERNING HOVER TYPE ELECTRIC BROODER CAMPAIGN

REA has added hover type electric brooders complying with its Specifications to the list of electrical appliances which may be financed under Installation Loan Contracts.

Many suggestions and instructions concerning a brooder campaign are contained in this Portfolio. There are set forth in these "Instructions" in concise form, the steps you should take in connection with the program. If you desire to proceed under different arrangements, you will first be expected to receive the approval of REA in order to avoid needless delays and misunderstanding.

1. You should first send a letter to all manufacturers, or one of their distributors or dealers, inviting them to submit offers to you for the sale of brooders to your Consumers and setting forth the conditions upon which such offers will be received by you. Enclosed herewith is a list of manufacturers, which, to the best of our knowledge, is complete. Such letter should be in the form of Form B-1, (page 34), enclosed herewith, and should be sent to at least all of the manufacturers, or their representatives, which serve the area. You should fill in, in the first paragraph of your letter, the time and date upon which offers are to be in your possession.

2. At the time specified in your letter, but not before, all offers should be opened and tabulated. No offers submitted later than the time specified in your letter should be considered. You should then approve the best offer or offers, being guided particularly by the procedure outlined in, "A Suggested Method of Comparing Brooder Values," Form B-9 (pages 48 and 49), also "Evaluation Schedule," Form B-10, (page 50), in connection with the "Guaranteed Operating Characteristics" data, (pages 25-27), and "Price Schedules," Form B-8, (page 47), supplied by manufacturers. You may approve more than one offer. You may also approve only a part of an offer. Only those offers submitted in the form and on the terms specified in your letter should be considered.

3. You should then notify all offerers whose offers you approve by letters in the form of Form B-3, (page 38).

4. You should then determine whether you will require any approved offerer to submit a bond with respect to complying with the terms of his offer. We believe that you will rarely find it necessary to require a bond. If you do decide to require such a bond, notify such offerer or offerers and you should then receive a bond from each such offerer in the form of Form B-4, (page 39), duly executed by the offerer and a surety satisfactory to you, in the penal sum of not less than $5,000. This bond is designed to assure that such offerers will abide by the terms of their offers for the full period during which their offers are to remain open. If any approved offerer who submits such a bond refuses to sell a brooder to any Consumer or Consumers in accordance with the terms of his offer, such Consumer or Consumers, or you as agent

for such Consumer or Consumers, may take such action as is deemed necessary to compensate for any damages suffered on account of such refusal.

5. Orders from Consumers for purchases of such brooders as are offered for sale by approved offerers are then to be collected by you. All orders should be in the form of Form B-5, (page 41). The same Order Form is to be used whether or not the purchase is to be financed by you. You should also receive from each Consumer a down payment of 10% in cash of the total amount of the cash price of his order. Those Consumers desiring the balances of the cash prices of their purchases to be financed by you should, in addition, submit to you an application for financing in the form of Form B-6, (page 42).

6. Your Finance Committee should then pass upon all applications for financing and should fill in and execute the "Preliminary Approval" at the end of each application approved. The maximum terms allowed on brooder financing are semi-annual payments for two (2) years.

7. All Consumers whose applications for financing are approved should then be instructed to execute a conditional sales contract for the purchase of the brooders desired, using the "Gen. Cond. Sale Cont." form. Conditional Sales Contract forms will be supplied by REA. You should be careful to check that the insertions in the contract are complete and accurate. Check all figures pursuant to the tables and instructions contained in REA Form UT-70, "Time Payment Tables For Financing Electrical Installations and Appliances." No notes need be executed by Consumers in connection with the financing of electric brooders, the obligation of the Consumer being sufficiently contained in the Conditional Sales Contract. If any Consumer's application for financing is not approved, you should immediately return to such Consumer the 10% cash down payment collected by you. Four copies of each Conditional Sales Contract should be executed by the Consumer and submitted to you.

8. You should then forward to the respective approved offerers, by letters in the form of Form B-7, (page 45), all Consumers' orders and down payments thereon, together with the Conditional Sales Contracts filled in and executed by the Consumers. All four copies of each Contract should be forwarded to the offerer.

9. The offerer will then execute the Conditional Sales Contracts and also the assignments thereof, and will return them to you together with invoices for the balances due on all orders, retaining one counterpart of each Conditional Sales Contract for its files. The offerer will also ship all brooders to you. The transactions on these financed sales, insofar as the offerer is concerned, will be essentially cash ones since the offerer will receive the balances due on account of the cash prices of the financed sales at the same time as it receives the balances due on the cash sales, namely, within thirty (30) days after receipt of the brooders by you.

10. On receipt of the brooders, you will notify all Consumers that the brooders have arrived and that they should call for them. All Consumers making cash purchases must pay the balances of the cash prices at such time. Any Consumer, of course, is entitled to an inspection and test of his brooder to determine whether or not it complies with the REA Specifications before he accepts his brooder and pays therefor. At such time, you should also deliver

to all Consumers whose sales are to be financed, a counterpart of the Conditional Sales Contract executed by the offerer and assigned to you.

11. You will then forward to REA the regular form of Installation Loan requisition, accompanied by a counterpart of each Conditional Sales Contract assigned by you to the United States of America. You should also retain a counterpart of each Conditional Sales Contract for your files. Read carefully Article II of your Installation Loan Contract for the provisions governing advances of funds thereunder, and follow carefully the "Instructions For Requisitioning And Accounting For Funds Under The Installation Loan Contract" to make certain the requisition will not be disapproved because of irregularities in form. Make certain your Installation Note accompanying the requisition is properly filled out, the Conditional Sales Contracts are all correctly filled in, properly executed, and duly assigned by the offerer to you, and by you to the United States of America, and that the requisition form itself is properly filled out. If the requisition is improperly submitted by you, necessitating its return by our Finance Division to you for correction, it will mean unnecessary delay in the forwarding of the funds to you. This will in turn mean a delay in your being able to forward the funds to the offerer. It is unfair to the offerer to make him wait for his money, and such delay may, of course, endanger the whole plan, as well as your future plans for financing other appliances. It is of prime importance, therefore, that special attention be given by you to the submission of the requisition properly filled out. Wire or send a letter airmail to REA asking for information on any point on which you are not clear before submitting the requisition. The submission of such a proper requisition by you will enable you to receive the necessary funds well within the thirty (30) day period you mentioned in your invitation to the offerer to submit his offer.

12. Upon receipt by you of the funds requisitioned from REA for the sales to be financed by you, and the payment to you by Consumers of their balances due on cash transactions, you will immediately forward to the offerer all balances of the cash prices. Funds advanced to you for brooder financing like all other funds advanced under the Installation Loan Contract, must be immediately deposited in the Special Installation Account specified in the Installation Loan Contract and withdrawn only to pay the approved offerers the amounts due them.

13. All moneys collected from Consumers on account of their time payments on their financed sales of brooders will, like all other payments received from Consumers on financed transactions under your Installation Loan Contract, be deposited by you in the "Installation Loan Payment Trust Account" set up by you pursuant to the Installation Loan Contract.

Any question concerning these instructions should be directed to the Utilization Division of REA.

BROODER MANUFACTURERS

Adams Electric Brooder Co., 509 Delaware Street, Hiawatha, Kansas
American Electric Incubator Co., New Brunswick, N. J.
Anderson Box Co., Indianapolis, Ind.
Automatic Electric Heater Co., 1505 Race Street, Philadelphia, Pa.
Beacon Steel Products Co., Westminster, Maryland
Belle City Incubator Company, Racine, Wisconsin
Bradley, David Manufacturing Works, Bradley, Illinois
Brower Manufacturing Co., Quincy, Illinois
Buckeye Incubator Company, Springfield, Ohio
Buffalo Incubator Company, 15 Bradley Street, Buffalo, New York
Cyclone Manufacturing Company, Urbana, Indiana
Globe American Corporation, Kokomo, Indiana
Hawkins Million Dollar Hen, Inc., P. O. Box 216, Mt. Vernon, Illinois
Hoeft & Company, Inc., North Chicago, Illinois
H. D. Hudson Mfg. Co., 589 E. Ill. St., Chicago, Ill.
Illinois Supply Company, Aurora, Illinois
James Mfg. Co., Ft. Atkinson, Wis.
Keen Poultry Equipment Co., 420-32 Pear Street, Vineland, N. J.
Klein Manufacturing Company, Burlington, Ohio
Leahy Manufacturing Company, Higginsville, Missouri
Lyon Rural Electric Company, San Diego, California
Mailwin Manufacturing Company, 1202 Stewart Street, Seattle, Washington
Macomb Steel Products Co., Div. of Globe American Corp., Macomb, Illinois
Master Incubator Company, Vancouver, Washington
Mit-Shel Stamping Manufacturing Company, Quincy, Illinois
Montgomery, Ward & Company, Chicago, Illinois
National Electric Appliance Co., 11840 Detroit Avenue, Cleveland, Ohio
National Ideal Co., 914 Summit St., Toledo, Ohio
New McCurdy Manufacturing Company, Ada, Ohio
Oakes Mfg. Company, Tipton, Indiana
E. J. Parker Company, Spencerport, New York
Petaluma Electric Incubator Company, Petaluma, California
Ira M. Petersime & Son, Gettysburg, Ohio
Phelan Brooder Company, Oklahoma City, Oklahoma
Poltriquip Manufacturing Co., 2636 Humboldt St., Los Angeles, California
Premier Poultry Equipment Company, Quincy, Illinois
Reliable Incubator & Brooder Company, Quincy, Illinois
Robey Manufacturing Co., 1937 Harvey Street, East Lansing, Michigan
Royal Manufacturing Co., Bowling Green, Ohio
St. Helens Manufacturing Company, Centralia, Washington
Sauer Brothers, 14820 Foothill Blvd., San Leandro, California
Sears, Roebuck & Company, Chicago, Illinois
H. M. Sheer Company, Quincy, Illinois
Shenandoah Equipment Corp., Harrisonburg, Va.
Starline, Inc., Harvard, Illinois
Tacoma Incubator Manufacturing Co., RFD #3, Box 396, Tacoma, Washington
Thermo-Electric Incubator Brooder Mfg. Co., New Orleans, Louisiana
Trumbull Electric Mfg. Co., Plainville, Conn.
Wellington V. Smith Company, Cleveland, Ohio
White Manufacturing Company, Gardena, California
A. R. Wood Mfg. Co., 21 Cherry Street, Santa Cruz, Calif.
Woodmanse Manufacturing Company, Freeport, Illinois

LETTER TO BE SENT BY COOPERATIVE TO MANUFACTURERS, DISTRIBUTORS AND DEALERS INVITING THE SUBMISSION OF OFFERS TO SELL HOVER TYPE ELECTRIC BROODERS TO COOPERATIVE'S CONSUMERS

(Date)

(Name)

(Address)

Gentlemen:

The undersigned Cooperative is inviting interested manufacturers, distributors and dealers to submit to persons (hereinafter called "consumers"), receiving or proposing to receive electric service from the Cooperative, offers for the sale of hover type electric brooders and invites you to submit such an offer. All such offers must be received by the Cooperative not later than 5:00 P. M. on , 194 .

All such offers will be received and will be deemed to have been made subject to the following terms and conditions:

1. All offers are to be made to consumers and the Cooperative shall not in any manner be liable as a result of using its facilities to secure such offers for consumers.

2. Each offer must be submitted on the forms (Form B-2) included in the "Brooder Portfolio" of the Rural Electrification Administration of United States of America, a copy of which has already been forwarded directly to you by the Rural Electrification Administration. If you have not received a copy of the Portfolio you may obtain one either from the Cooperative or from the Rural Electrification Administration. All prices quoted in the offer shall include, and shall be deemed to have included, all amounts estimated to be payable by the offerer or the consumer in respect to all taxes imposed by any taxing authority on the sale, purchase or use of electric brooders and every part thereof. All such taxes shall be payable by the offerer.

3. All brooders included in any offer must comply with the Specifications for hover type electric brooders (pages 21-27) approved by the Rural Electrification Administration, a copy of which is included in the Portfolio.

4. All offers will be subject to approval by the Cooperative as a whole or in part. Offers and parts of offers not approved by the Cooperative will not be submitted to consumers. No assurance is intended to be given that any offer, or any part of any offer, will be approved by the Cooperative.

5. The Cooperative will receive from consumers, acceptances of approved offers or approved parts of offers and will forward all such acceptances to the respective offerers, together with a down payment of ten per centum (10%) of the price of each brooder in respect of which an offer is accepted. Upon receipt of each acceptance and down payment the offerer will be obligated to ship immediately to the Cooperative the brooder or brooders covered by the acceptance. The Cooperative will, upon receipt of such brooder or brooders, collect from the consumer the balance of the purchase price and will forward the same immediately to the offerer.

6. Some consumers may desire to have their purchases financed by the Cooperative with funds borrowed by the Cooperative from the Rural Electrification Administration. In each such case, after the consumer is approved for such financing by the Cooperative, the Cooperative will forward to the offerer, together with the acceptance and down payment, a conditional sale contract covering the unit or units in respect of which the offer is accepted. The offerer will be required to execute a conditional sale contract in respect thereof and to assign such contract (without recourse against the offerer) to the Cooperative and to return such contract to the Cooperative. A form of such conditional sale contract (appended) is included in the Portfolio. Upon receipt of a conditional sale contract so executed and assigned by the offerer the Cooperative will forward it to the Rural Electrification Administration which will lend to the Cooperative the funds necessary to pay the balance of the purchase price to the offerer. It is expected that the Cooperative will receive such funds from the Rural Electrification Administration within thirty (30) days after receipt by it from the offerer of the conditional sale contract.

7. The Cooperative in receiving and transmitting acceptance and payments shall not be deemed to be the purchaser of the brooder or brooders covered thereby and shall not be liable to the offerer or to any other person for any loss in connection with or arising from any such acceptance or from the sale or use of any brooder or brooders.

8. Any consumer desiring to purchase brooders and to pay cash in full therefor may make such purchase from any one at any price without any obligation to the Cooperative or to approved offerers. The Cooperative will, however, finance purchases by consumers only from approved offerers. Inasmuch as more than one offer may be approved and such approved offers, or parts of offers, will be submitted to

the consumer for his selection, no assurance is given that any offerer will make any sales whatever to consumers.

9. At any time prior to thirty (30) days after delivery of any brooder the consumer may reject such brooder if it does not comply with said Specifications. Upon such rejection the offerer shall immediately replace the same with a brooder which does comply with said Specifications, or shall refund to the consumer the amounts paid by, or on behalf of, the consumer on account of the purchase price of such brooder.

10. If the Cooperative shall so require, any offerers submitting an offer which is approved in whole or in part shall submit a bond in form and substance satisfactory to the Cooperative in the penal sum of not less than $5,000, with a surety or sureties satisfactory to the Cooperative, conditioned upon the faithful performance by the offerer of the terms of the approved offer, or approved part thereof. A satisfactory form of bond (Form B-4) is included in the Portfolio.

11. Each offerer whose offer, or part thereof, is accepted will be required to deliver pursuant thereto only such brooders as have been manufactured in the United States substantially all from articles, materials or supplies mined, produced or manufactured, as the case may be, in the United States and to submit to the Cooperative such certificates with respect to compliance with the provisions of this paragraph as the Cooperative may from time to time require.

If any of the above terms and conditions are not clear, please have no hesitation in asking us about them. We sincerely trust that you will let us have the benefit of an offer.

Very truly yours,

_____

by_____

OFFER TO SELL HOVER TYPE ELECTRIC BROODERS

SUBMITTED PURSUANT TO INVITATION OF

_____
(Name of Cooperative)

_____, _____
(City) (State)

_____
(Date)

To: Persons (hereinafter called "Consumers") receiving or proposing to receive electric service from
(hereinafter called the "Cooperative").

1. The undersigned (hereinafter called the "Offerer") hereby submits this offer pursuant to and upon and subject to the terms and conditions of the invitation contained in the letter of the Cooperative to the Offerer dated _____.

2. The Offerer hereby offers to sell to Consumers the brooders listed in the "Price Schedule" (Schedule of Prices Form B-8) attached hereto and made a part hereof, at the prices set forth opposite the respective model numbers. Literature describing such brooders is enclosed herewith. All such brooders comply with the Specifications for Hover type electric brooders dated _____, 19___, approved by the Rural Electrification Administration of the United States of America, and the Offerer hereby warrants and guarantees that all such brooders shall perform in all respects as stated in the "Guaranteed Operating Characteristics,"(Appendix I)attached hereto and made a part hereof.

3. If this offer, or any part hereof, is approved by the Cooperative, this offer, or such part thereof, as the case may be, shall remain in effect through _____, 19___.

_____
(Offerer)

by _____
(Signature and Title)

_____
(Address)

LETTER TO BE SENT BY COOPERATIVE TO OFFERERS WHOSE OFFERS, OR PARTS OF OFFERS, ARE APPROVED.

(Date)

(Name)

(Address)

Dear Sirs:

You are hereby notified that the Offer dated _____ 19__, which you submitted to us pursuant to the invitation contained in our letter dated _____, 19__, is approved as follows:

This approval, however, is subject to the terms and conditions of said letter.

It will be necessary for you to furnish to us a bond with respect to your compliance with the terms of your offer. You have received an approved form of bond. Please furnish such a bond to us as soon as possible, duly executed by you and a satisfactory surety.*

Very truly yours,

*This paragraph is to be included only in those cases in which the Cooperative determines that it will require the approved offerer to submit such a bond. Omit this paragraph in those cases in which the approved offerer will not be required to submit any bond.

CONTRACTOR'S BOND

Know all men that we, _____,
(Name of Seller)
as Principal, and _____, as Surety, are held and firmly bound unto persons (hereinafter called "Consumers") served or proposed to be served with electric energy by _____ _____(hereinafter called the "Cooperative"), who accept the offer made by the Principal on the ____ day of _____, 19____ (hereinafter called the "Offer"), to sell to Consumers hover type electric brooders, and to the Cooperative as agent for the Consumers, in the penal sum of _____Dollars ($_____), and to their successors and assigns, for the payment of which sum well and truly to be made we bind ourselves, our executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that, if, prior to the expiration date specified in the Offer, the Offer shall be accepted by Consumers, or any of them, the Principal shall comply with the terms of the Offer, including, without limitation, the terms of the specifications, guarantees and warranties specified or contained therein, then this obligation shall be void, but otherwise shall remain in full force and effect.

No alteration or amendment of any character whatsoever which may be made in the Offer, including, without limitation, the specifications, guarantees and warranties specified or contained therein, shall release in any way the Principal and the Surety, or either of them, from liability hereunder. Notice to the Surety of any such alteration or amendment which

may occur subsequent to the execution hereof is hereby expressly given.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals this _____ day of _____, 19___, the name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned representatives pursuant to due authorization.

(Seal) _____*
(Principal)

Attest: by _____
(Signature and Title)

_____
Secretary

(Seal) _____
(Surety)

Attest: by _____
(Signature and Title)

_____
Secretary

* The full name of the Principal must be signed. If a partnership, the signature must be in the partnership name by each partner. If a corporation, the signature must be in the corporate name by a duly authorized officer and the corporate seal affixed and attested by the Secretary of the corporation. A typewritten copy of all such names must be included, either typed in above signatures or on a separate sheet of paper.

Form B-5; 1/15/40

PURCHASE ORDER

Approved Hover Type Electric Brooders for REA Project Consumers

To_____ No._____
(Name of Offerer) (This Order No. must appear on your Invoice)

_____ _____, 19__
(Address of Offerer) (Date)

The undersigned, who receives or proposes to receive electric service from (hereinafter called the "Cooperative") hereby accepts, in respect to the equipment listed below, your Offer dated_____, 19__, made to consumers of the Cooperative. Accordingly, please deliver to the undersigned, at the office of the Cooperative, brooders:

Hover Type Electric Brooders

No. of Brooders	Model	Description	Delivered Price Unit	Delivered Price Total
		Equipped as follows:		

Total $_____

Check or money-order made payable to your order in the amount of $_____ is enclosed herewith. The balance of $_____ will be mailed to you within 30 days after receipt of the above-listed brooders.

Please acknowledge this Order immediately, stating when brooders will be shipped. The undersigned reserves the right to cancel this order if shipment is not made as promised in your acknowledgment. All brooders ordered are subject to inspection and acceptance.

Order Approved:

_____
(Consumer)

_____

_____
(Consumer's Address)

_____
(Cooperative)

by_____
(Signature and Title)

_____, 19__.

Form B-6; 1/15/40

APPLICATION FOR FINANCING

PURCHASE OF HOVER TYPE ELECTRIC BROODERS

_____, 19___

To: _____
(Name of Cooperative)

1. I hereby apply for the partial financing by you of the purchase by me of the electric brooder or brooders specified in the annexed Purchase Order.

2. I agree to make a cash down payment of 10% of the total cost of said brooder or brooders as shown on said Purchase Order and desire that the balance of said cost be financed by you upon terms and conditions approved by you. I desire to pay said balance by making _____ (monthly, _____ payments for _____ years.* quarterly, semi-annual)

3. In connection with this application, I hereby set forth the following information:

   (a) I have lived on the premises designated below for the following length of time:

   (b) Said premises consist of the following number of acres:

   (c) I engage in the following type or types of farming:

   (d) The name and address of the owner of said premises, if other than myself, is:

   Name Address

   (e) Said premises are subject to the following mortgages and other liens:

Mortgages

Name of Mortgagee	Address of Mortgagee	Description of Mortgage	Amt. of Mortgage	Date of Maturity

* Maximum terms allowed -- Semi-annual payments for 2 years.
Minimum Monthly Payment $.75; minimum semi-annual payment $4.50

Form No. 1/12/42

A. MILLARD'S PEN FINE FINS

PURCHASE OF HOVER TYPE ELECTRIC BROODERS

_____, 19__

To: _____
(Name of Cooperative)

1. I hereby apply for the partial financing by you of the purchase by me of the electric brooder or brooders specified in the enclosed inventory form.

2. I agree to make a cash down payment of 10% of the total cost of said brooder or brooders on delivery on mail transfer, and I declare that the balance of said cost be financed by you upon terms not a total to approved by you. I authorize the said mail carrier by making _____
(Name of)

_____ payments for _____ months.
(Quarterly, semi-annual)

3. In connection with this application, I hereby [illegible] the following information:

(a) I have lived on the premises described below for the following length of time:

(b) Until recently a resident of the following town or county:

(c) I engage in the following business or type of farming:

( ) The name and address of my [illegible] of cash [illegible], if other than you is:

Name Address

(e) Bank references are only as to the following [illegible] and other lines:

Portrayal

_____
Description of Acts of Dealers

_____

Other Liens

Name of Lienor	Address of Lienor	Description of Lien	Amount of Lien	Date of Maturity

(f) The estimated value of said premises is:

(g) I am purchasing from the following stores on credit:

Name	Address

(h) I am now purchasing the following on credit on the following terms:

Machinery, Implements, etc. Description	Seller	Payments (Set forth amount of each payment and whether payments are made monthly, quarterly, semi-annually)	Date of Maturity of Indebtedness

(i) I submit the following as credit references:

Name	Address

4. I understand that preliminary approval of this application will be based only upon the investigation to be made of my credit standing, and that final approval will be dependent upon the execution of a conditional sales contract, in form and substance satisfactory to you, between myself and a Seller approved for such purposes by you, for the proposed sale.

5. I hereby warrant and represent that all of the information and statements contained herein are true and correct.

_____
(Consumer)

_____
(Consumer's Address)

_____

PRELIMINARY APPROVAL

_____, 19__

The undersigned hereby gives preliminary approval to the partial financing of the purchase of the electric brooders specified in the foregoing application, as follows:

Total amount approved for financing	Intervals at which payments are to be made	No. of years in which debt shall mature	Seller named in Purchase Order

This approval is conditioned upon the execution of a satisfactory contract between the Applicant and the above-mentioned Seller.

Finance Committee

_____

_____

_____

Gen. Cond. Sale Cont.

CONDITIONAL SALE CONTRACT

COOPERATIVE COPY

Contract dated _____, 19_____, between _____

(hereinafter called the "Buyer") and _____ (hereinafter called the "Seller").*

1. The Seller hereby sells and the Buyer hereby purchases, upon and subject to the terms and conditions hereinafter set forth, the chattel(s) described below, the receipt whereof in good condition by the Buyer is hereby acknowledged, to wit:

Quantity	Description of Article	Manufacturer	Manufacturer's Catalog No.	Cash Price
				$

2. The agreed time price for the above chattel(s) is computed as follows_____

The Buyer has paid to the Seller the Down Payment (item *b*), receipt of which by the Seller is hereby acknowledged. The Buyer agrees to pay the Total Amount Payable (item *d*) in equal _____ installments of $_____ each, commencing _____, 19____
(Monthly, quarterly, semiannual)

a. TOTAL CASH PRICE_____ $_____

b. DOWN PAYMENT_____ _____

c. BALANCE TO BE FINANCED_____ (Item *a* minus item *b*)

d. TOTAL AMOUNT PAYABLE_____ (Includes finance charge) _____

e. TIME PRICE_____ (Item *b* plus item *d*) $_____

3. Title to said chattel(s) shall remain in the Seller until the time price is paid in full, at which time the title to said chattel(s) shall pass to the Buyer.

4. The Buyer shall keep said chattel(s) in good order, condition, and repair, free of liens, taxes, and encumbrances, and will not misuse, secrete, or remove any part of said chattel(s) from the premises of the Buyer specified below, and will not sell, convey, mortgage, lease, or in any manner dispose of or encumber or transfer said chattel(s), or any interest therein, or permit or attempt to do any of such acts, without the written consent of the Seller.

5. Risk of loss, injury, or destruction to said chattel(s) shall be borne by the Buyer, and such loss, injury, or destruction shall not release the Buyer from any obligation hereunder.

6. Time is of the essence of this contract. Upon default by the Buyer in any of the payments, conditions, or covenants hereof, or if the Seller deems the debt insecure, or said chattel(s) is (are) in danger of misuse, or is (are) stolen, lost, damaged, or totally or partially destroyed, or if the Buyer permits said chattel(s) to become subject to any levy or execution by any officer, or if a petition in bankruptcy or for a receiver be filed by or against the Buyer, the full amount owing hereunder shall immediately be payable at the option of the Seller, and the Seller or its duly authorized agent, with or without notice, demand, or legal process, may take possession of said chattel(s), wherever located, and remove the same, and the Buyer hereby expressly consents to entry upon his premises for such purpose.

7. In the event the Seller retakes possession of said chattel(s), the Seller may retain all payments made by the Buyer prior thereto, not by way of penalty but for the reasonable use of said chattel(s); the Seller may make such repairs to said chattel(s) as the Seller shall deem necessary; and the Buyer hereby appoints the Seller his agent and attorney-in-fact to sell said chattel(s), at any time or place at public or private sale, without demand for performance, without notice, and with or without having such chattel(s) at the place of sale. Out of the proceeds of any such sale there shall first be paid the expense of seizure, holding, removal, repairing, and sale, including reasonable attorney's fees, and the balance thereof shall be applied to the payment of the balance due, and the surplus, if any, shall be paid to the Buyer. The Buyer shall pay any deficiency. The Buyer waives any claims, demands, or damages arising out of repossession, retention, or sale of said chattel(s).

8. The receipt or acceptance by the Seller of partial payment of any amount due hereunder, or of any amount after default, or any renewal or extension of the payment of any amount due hereunder, or the failure of the Seller promptly to exercise any of the remedies herein provided, shall not be deemed to be a waiver of any default or breach hereunder, or to release the Buyer from the strict performance of the obligations or conditions hereunder, or to prevent the Seller from pursuing any or all of the remedies provided hereunder. Waiver of any breach or default shall not constitute a waiver of any further breach or default.

9. All right, title, and interest of the Seller in, to, and under this contract may be assigned, and the word "Seller" wherever used herein shall include the legal representatives and assigns of the Seller, but the right, title, and interest of the Buyer in, to, and under this contract may not be assigned without the written consent of the Seller.

10. Any provision of this contract which is unenforceable or contrary to law shall be ineffective to the extent of such provision and shall not invalidate the remaining provisions of this contract.

11. The Buyer acknowledges receipt of a copy of this contract and certifies that he fully understands all of its terms and conditions.

IN WITNESS WHEREOF the parties hereto have executed and delivered this contract the day and year first above written.

_____ [SEAL]
(Buyer)

_____ [SEAL]
(Seller)†

_____
(Buyer's address)

by _____
(Name and title)

_____
(Seller's address)

ASSIGNMENT BY SELLER TO COOPERATIVE

For value received, the undersigned does hereby sell, assign, transfer, and set over, without recourse, all its right, title and interest in and to the foregoing contract and any and all chattel(s) described therein to _____, together with all rights of action accrued or which may hereafter accrue hereunder, with power to such assignee to take all legal or other proceedings in the name of undersigned or assignee. Undersigned hereby warrants that the contents of the foregoing contract have been fully explained to the Buyer.

_____ [SEAL]
(Seller)†

by _____

ASSIGNMENT BY COOPERATIVE TO UNITED STATES OF AMERICA

For value received, the undersigned does hereby sell, assign, transfer, and set over, with recourse, all its right, title, and interest in and to the foregoing contract and any and all chattel(s) described therein to United States of America, acting through the Administrator of the Rural Electrification Administration, Washington, D. C., or its agent, together with all rights of action accrued or which may hereafter accrue hereunder, with power to such assignee to take all legal or other proceedings in the name of undersigned or assignee. All warranties, covenants, terms, and provisions of the Installation Loan Contract between undersigned and assignee are made a part hereof and incorporated herein by reference and are applied to the foregoing contract.

_____
(Project designation)

_____ [SEAL]

by _____
(Name and title)

* Type or print all names inserted.
† Insert corporate, firm, dealer, or trade name of Seller. If Seller is a corporation, insert title of person executing for the corporation.

GPO 16—8093

Gen. Cond. Sale Cont.

CONDITIONAL SALE CONTRACT

DEALER'S COPY

Contract dated _____, 19_____, between _____

(hereinafter called the "Buyer") and _____ (hereinafter called the "Seller").*

1. The Seller hereby sells and the Buyer hereby purchases, upon and subject to the terms and conditions hereinafter set forth, the chattel(s) described below, the receipt whereof in good condition by the Buyer is hereby acknowledged, to wit:

Quantity	Description of Article	Manufacturer	Manufacturer's Catalog No.	Cash Price
				$

2. The agreed time price for the above chattel(s) is computed as follows_____

The Buyer has paid to the Seller the Down Payment (item *b*), receipt of which by the Seller is hereby acknowledged. The Buyer agrees to pay the Total Amount Payable (item *d*) in equal _____ installments of $_____ each, commencing _____, 19____
(Monthly, quarterly, semiannual)

a. TOTAL CASH PRICE_____ $_____

b. DOWN PAYMENT_____ _____

c. BALANCE TO BE FINANCED__ (Item *a* minus item *b*) [ ]

d. TOTAL AMOUNT PAYABLE___ (Includes finance charge) _____

e. TIME PRICE_____ (Item *b* plus item *d*) $_____

3. Title to said chattel(s) shall remain in the Seller until the time price is paid in full, at which time the title to said chattel(s) shall pass to the Buyer.

4. The Buyer shall keep said chattel(s) in good order, condition, and repair, free of liens, taxes, and encumbrances, and will not misuse, secrete, or remove any part of said chattel(s) from the premises of the Buyer specified below, and will not sell, convey, mortgage, lease, or in any manner dispose of or encumber or transfer said chattel(s), or any interest therein, or permit or attempt to do any of such acts, without the written consent of the Seller.

5. Risk of loss, injury, or destruction to said chattel(s) shall be borne by the Buyer, and such loss, injury, or destruction shall not release the Buyer from any obligation hereunder.

6. Time is of the essence of this contract. Upon default by the Buyer in any of the payments, conditions, or covenants hereof, or if the Seller deems the debt insecure, or said chattel(s) is (are) in danger of misuse, or is (are) stolen, lost, damaged, or totally or partially destroyed, or if the Buyer permits said chattel(s) to become subject to any levy or execution by any officer, or if a petition in bankruptcy or for a receiver be filed by or against the Buyer, the full amount owing hereunder shall immediately be payable at the option of the Seller, and the Seller or its duly authorized agent, with or without notice, demand, or legal process, may take possession of said chattel(s), wherever located, and remove the same, and the Buyer hereby expressly consents to entry upon his premises for such purpose.

7. In the event the Seller retakes possession of said chattel(s), the Seller may retain all payments made by the Buyer prior thereto, not by way of penalty but for the reasonable use of said chattel(s); the Seller may make such repairs to said chattel(s) as the Seller shall deem necessary; and the Buyer hereby appoints the Seller his agent and attorney-in-fact to sell said chattel(s), at any time or place at public or private sale, without demand for performance, without notice, and with or without having such chattel(s) at the place of sale. Out of the proceeds of any such sale there shall first be paid the expense of seizure, holding, removal, repairing, and sale, including reasonable attorney's fees, and the balance thereof shall be applied to the payment of the balance due, and the surplus, if any, shall be paid to the Buyer. The Buyer shall pay any deficiency. The Buyer waives any claims, demands, or damages arising out of repossession, retention, or sale of said chattel(s).

8. The receipt or acceptance by the Seller of partial payment of any amount due hereunder, or of any amount after default, or any renewal or extension of the payment of any amount due hereunder, or the failure of the Seller promptly to exercise any of the remedies herein provided, shall not be deemed to be a waiver of any default or breach hereunder, or to release the Buyer from the strict performance of the obligations or conditions hereunder, or to prevent the Seller from pursuing any or all of the remedies provided hereunder. Waiver of any breach or default shall not constitute a waiver of any further breach or default.

9. All right, title, and interest of the Seller in, to, and under this contract may be assigned, and the word "Seller" wherever used herein shall include the legal representatives and assigns of the Seller, but the right, title, and interest of the Buyer in, to, and under this contract may not be assigned without the written consent of the Seller.

10. Any provision of this contract which is unenforceable or contrary to law shall be ineffective to the extent of such provision and shall not invalidate the remaining provisions of this contract.

11. The Buyer acknowledges receipt of a copy of this contract and certifies that he fully understands all of its terms and conditions.

IN WITNESS WHEREOF the parties hereto have executed and delivered this contract the day and year first above written.

_____ [SEAL]
(Buyer)

_____ [SEAL]
(Seller)†

_____
(Buyer's address)

by _____
(Name and title)

_____
(Seller's address)

ASSIGNMENT BY SELLER TO COOPERATIVE

For value received, the undersigned does hereby sell, assign, transfer, and set over, without recourse, all its right, title and interest in and to the foregoing contract and any and all chattel(s) described therein to _____, together with all rights of action accrued or which may hereafter accrue hereunder, with power to such assignee to take all legal or other proceedings in the name of undersigned or assignee. Undersigned hereby warrants that the contents of the foregoing contract have been fully explained to the Buyer.

_____ [SEAL]
(Seller)†

by _____

ASSIGNMENT BY COOPERATIVE TO UNITED STATES OF AMERICA

For value received, the undersigned does hereby sell, assign, transfer, and set over, with recourse, all its right, title, and interest in and to the foregoing contract and any and all chattel(s) described therein to United States of America, acting through the Administrator of the Rural Electrification Administration, Washington, D. C., or its agent, together with all rights of action accrued or which may hereafter accrue hereunder, with power to such assignee to take all legal or other proceedings in the name of undersigned or assignee. All warranties, covenants, terms, and provisions of the Installation Loan Contract between undersigned and assignee are made a part hereof and incorporated herein by reference and are applied to the foregoing contract.

_____
(Project designation)

_____ [SEAL]

by _____
(Name and title)

* Type or print all names inserted.
† Insert corporate, firm, dealer, or trade name of Seller. If Seller is a corporation, insert title of person executing for the corporation.

GPO 16—8093

Gen. Cond. Sale Cont.

CONDITIONAL SALE CONTRACT

CONSUMER'S COPY

Contract dated _____, 19_____, between _____

(hereinafter called the "Buyer") and _____ (hereinafter called the "Seller").*

1. The Seller hereby sells and the Buyer hereby purchases, upon and subject to the terms and conditions hereinafter set forth, the chattel(s) described below, the receipt whereof in good condition by the Buyer is hereby acknowledged, to wit:

Quantity	Description of Article	Manufacturer	Manufacturer's Catalog No.	Cash Price
				$

2. The agreed time price for the above chattel(s) is computed as follows_____

The Buyer has paid to the Seller the Down Payment (item *b*), receipt of which by the Seller is hereby acknowledged. The Buyer agrees to pay the Total Amount Payable (item *d*) in equal _____ installments of $_____ each, commencing _____, 19____
(Monthly, quarterly, semiannual)

a. TOTAL CASH PRICE_____ $_____

b. DOWN PAYMENT_____ _____

c. BALANCE TO BE FINANCED___ (Item *a* minus item *b*) [ ]

d. TOTAL AMOUNT PAYABLE___ (Includes finance charge) _____

e. TIME PRICE_____ (Item *b* plus item *d*) $_____

3. Title to said chattel(s) shall remain in the Seller until the time price is paid in full, at which time the title to said chattel(s) shall pass to the Buyer.

4. The Buyer shall keep said chattel(s) in good order, condition, and repair, free of liens, taxes, and encumbrances, and will not misuse, secrete, or remove any part of said chattel(s) from the premises of the Buyer specified below, and will not sell, convey, mortgage, lease, or in any manner dispose of or encumber or transfer said chattel(s), or any interest therein, or permit or attempt to do any of such acts, without the written consent of the Seller.

5. Risk of loss, injury, or destruction to said chattel(s) shall be borne by the Buyer, and such loss, injury, or destruction shall not release the Buyer from any obligation hereunder.

6. Time is of the essence of this contract. Upon default by the Buyer in any of the payments, conditions, or covenants hereof, or if the Seller deems the debt insecure, or said chattel(s) is (are) in danger of misuse, or is (are) stolen, lost, damaged, or totally or partially destroyed, or if the Buyer permits said chattel(s) to become subject to any levy or execution by any officer, or if a petition in bankruptcy or for a receiver be filed by or against the Buyer, the full amount owing hereunder shall immediately be payable at the option of the Seller, and the Seller or its duly authorized agent, with or without notice, demand, or legal process, may take possession of said chattel(s), wherever located, and remove the same, and the Buyer hereby expressly consents to entry upon his premises for such purpose.

7. In the event the Seller retakes possession of said chattel(s), the Seller may retain all payments made by the Buyer prior thereto, not by way of penalty but for the reasonable use of said chattel(s); the Seller may make such repairs to said chattel(s) as the Seller shall deem necessary; and the Buyer hereby appoints the Seller his agent and attorney-in-fact to sell said chattel(s), at any time or place at public or private sale, without demand for performance, without notice, and with or without having such chattel(s) at the place of sale. Out of the proceeds of any such sale there shall first be paid the expense of seizure, holding, removal, repairing, and sale, including reasonable attorney's fees, and the balance thereof shall be applied to the payment of the balance due, and the surplus, if any, shall be paid to the Buyer. The Buyer shall pay any deficiency. The Buyer waives any claims, demands, or damages arising out of repossession, retention, or sale of said chattel(s).

8. The receipt or acceptance by the Seller of partial payment of any amount due hereunder, or of any amount after default, or any renewal or extension of the payment of any amount due hereunder, or the failure of the Seller promptly to exercise any of the remedies herein provided, shall not be deemed to be a waiver of any default or breach hereunder, or to release the Buyer from the strict performance of the obligations or conditions hereunder, or to prevent the Seller from pursuing any or all of the remedies provided hereunder. Waiver of any breach or default shall not constitute a waiver of any further breach or default.

9. All right, title, and interest of the Seller in, to, and under this contract may be assigned, and the word "Seller" wherever used herein shall include the legal representatives and assigns of the Seller, but the right, title, and interest of the Buyer in, to, and under this contract may not be assigned without the written consent of the Seller.

10. Any provision of this contract which is unenforceable or contrary to law shall be ineffective to the extent of such provision and shall not invalidate the remaining provisions of this contract.

11. The Buyer acknowledges receipt of a copy of this contract and certifies that he fully understands all of its terms and conditions.

IN WITNESS WHEREOF the parties hereto have executed and delivered this contract the day and year first above written.

_____ [SEAL]
(Buyer)

_____ [SEAL]
(Seller)†

_____
(Buyer's address)

by _____
(Name and title)

_____
(Seller's address)

ASSIGNMENT BY SELLER TO COOPERATIVE

For value received, the undersigned does hereby sell, assign, transfer, and set over, without recourse, all its right, title and interest in and to the foregoing contract and any and all chattel(s) described therein to _____, together with all rights of action accrued or which may hereafter accrue hereunder, with power to such assignee to take all legal or other proceedings in the name of undersigned or assignee. Undersigned hereby warrants that the contents of the foregoing contract have been fully explained to the Buyer.

_____ [SEAL]
(Seller)†

by _____

ASSIGNMENT BY COOPERATIVE TO UNITED STATES OF AMERICA

For value received, the undersigned does hereby sell, assign, transfer, and set over, with recourse, all its right, title, and interest in and to the foregoing contract and any and all chattel(s) described therein to United States of America, acting through the Administrator of the Rural Electrification Administration, Washington, D. C., or its agent, together with all rights of action accrued or which may hereafter accrue hereunder, with power to such assignee to take all legal or other proceedings in the name of undersigned or assignee. All warranties, covenants, terms, and provisions of the Installation Loan Contract between undersigned and assignee are made a part hereof and incorporated herein by reference and are applied to the foregoing contract.

_____
(Project designation)

_____ [SEAL]

by _____
(Name and title)

* Type or print all names inserted.
† Insert corporate, firm, dealer, or trade name of Seller. If Seller is a corporation, insert title of person executing for the corporation.

GPO 16—8093

Gen. Cond. Sale Cont.

CONDITIONAL SALE CONTRACT

R. E. A. COPY

Contract dated _____, 19_____, between _____

(hereinafter called the "Buyer") and _____ (hereinafter called the "Seller").*

1. The Seller hereby sells and the Buyer hereby purchases, upon and subject to the terms and conditions hereinafter set forth, the chattel(s) described below, the receipt whereof in good condition by the Buyer is hereby acknowledged, to wit:

Quantity	Description of Article	Manufacturer	Manufacturer's Catalog No.	Cash Price
				$

2. The agreed time price for the above chattel(s) is computed as follows_____

The Buyer has paid to the Seller the Down Payment (item *b*), receipt of which by the Seller is hereby acknowledged. The Buyer agrees to pay the Total Amount Payable (item *d*) in equal _____ installments of $_____ each, commencing _____, 19____
(Monthly, quarterly, semiannual)

a. TOTAL CASH PRICE_____ $_____

b. DOWN PAYMENT_____ _____

c. BALANCE TO BE FINANCED__ (Item *a* minus item *b*) [ ]

d. TOTAL AMOUNT PAYABLE___ (Includes finance charge) _____

e. TIME PRICE_____ (Item *b* plus item *d*) $_____

3. Title to said chattel(s) shall remain in the Seller until the time price is paid in full, at which time the title to said chattel(s) shall pass to the Buyer.

4. The Buyer shall keep said chattel(s) in good order, condition, and repair, free of liens, taxes, and encumbrances, and will not misuse, secrete, or remove any part of said chattel(s) from the premises of the Buyer specified below, and will not sell, convey, mortgage, lease, or in any manner dispose of or encumber or transfer said chattel(s), or any interest therein, or permit or attempt to do any of such acts, without the written consent of the Seller.

5. Risk of loss, injury, or destruction to said chattel(s) shall be borne by the Buyer, and such loss, injury, or destruction shall not release the Buyer from any obligation hereunder.

6. Time is of the essence of this contract. Upon default by the Buyer in any of the payments, conditions, or covenants hereof, or if the Seller deems the debt insecure, or said chattel(s) is (are) in danger of misuse, or is (are) stolen, lost, damaged, or totally or partially destroyed, or if the Buyer permits said chattel(s) to become subject to any levy or execution by any officer, or if a petition in bankruptcy or for a receiver be filed by or against the Buyer, the full amount owing hereunder shall immediately be payable at the option of the Seller, and the Seller or its duly authorized agent, with or without notice, demand, or legal process, may take possession of said chattel(s), wherever located, and remove the same, and the Buyer hereby expressly consents to entry upon his premises for such purpose.

7. In the event the Seller retakes possession of said chattel(s), the Seller may retain all payments made by the Buyer prior thereto, not by way of penalty but for the reasonable use of said chattel(s); the Seller may make such repairs to said chattel(s) as the Seller shall deem necessary; and the Buyer hereby appoints the Seller his agent and attorney-in-fact to sell said chattel(s), at any time or place at public or private sale, without demand for performance, without notice, and with or without having such chattel(s) at the place of sale. Out of the proceeds of any such sale there shall first be paid the expense of seizure, holding, removal, repairing, and sale, including reasonable attorney's fees, and the balance thereof shall be applied to the payment of the balance due, and the surplus, if any, shall be paid to the Buyer. The Buyer shall pay any deficiency. The Buyer waives any claims, demands, or damages arising out of repossession, retention, or sale of said chattel(s).

8. The receipt or acceptance by the Seller of partial payment of any amount due hereunder, or of any amount after default, or any renewal or extension of the payment of any amount due hereunder, or the failure of the Seller promptly to exercise any of the remedies herein provided, shall not be deemed to be a waiver of any default or breach hereunder, or to release the Buyer from the strict performance of the obligations or conditions hereunder, or to prevent the Seller from pursuing any or all of the remedies provided hereunder. Waiver of any breach or default shall not constitute a waiver of any further breach or default.

9. All right, title, and interest of the Seller in, to, and under this contract may be assigned, and the word "Seller" wherever used herein shall include the legal representatives and assigns of the Seller, but the right, title, and interest of the Buyer in, to, and under this contract may not be assigned without the written consent of the Seller.

10. Any provision of this contract which is unenforceable or contrary to law shall be ineffective to the extent of such provision and shall not invalidate the remaining provisions of this contract.

11. The Buyer acknowledges receipt of a copy of this contract and certifies that he fully understands all of its terms and conditions.

IN WITNESS WHEREOF the parties hereto have executed and delivered this contract the day and year first above written.

_____ [SEAL]
(Buyer)

_____ [SEAL]
(Seller)†

_____
(Buyer's address)

by _____
(Name and title)

_____
(Seller's address)

ASSIGNMENT BY SELLER TO COOPERATIVE

For value received, the undersigned does hereby sell, assign, transfer, and set over, without recourse, all its right, title and interest in and to the foregoing contract and any and all chattel(s) described therein to _____, together with all rights of action accrued or which may hereafter accrue hereunder, with power to such assignee to take all legal or other proceedings in the name of undersigned or assignee. Undersigned hereby warrants that the contents of the foregoing contract have been fully explained to the Buyer.

_____ [SEAL]
(Seller)†

by _____

ASSIGNMENT BY COOPERATIVE TO UNITED STATES OF AMERICA

For value received, the undersigned does hereby sell, assign, transfer, and set over, with recourse, all its right, title, and interest in and to the foregoing contract and any and all chattel(s) described therein to United States of America, acting through the Administrator of the Rural Electrification Administration, Washington, D. C., or its agent, together with all rights of action accrued or which may hereafter accrue hereunder, with power to such assignee to take all legal or other proceedings in the name of undersigned or assignee. All warranties, covenants, terms, and provisions of the Installation Loan Contract between undersigned and assignee are made a part hereof and incorporated herein by reference and are applied to the foregoing contract.

_____
(Project designation)

_____ [SEAL]

by _____
(Name and title)

* Type or print all names inserted.
† Insert corporate, firm, dealer, or trade name of Seller. If Seller is a corporation, insert title of person executing for the corporation.

GPO 16—8093

LETTER BY COOPERATIVE TO OFFERER TRANSMITTING ORDERS, DOWN PAYMENTS, AND CONDITIONAL SALES CONTRACTS

(Date)

(Name)

(Address)

Dear Sirs:

There are enclosed herewith the following acceptances, in the form of Purchase Orders, by our Consumers of your Offer to sell them brooders.

(All orders are to be listed by name of Consumer and Order No.)

Also enclosed is payment of $_____, representing 10% of the total amount of said Purchase Orders, as down payments made by said Consumers.

The purchases of the following Consumers are to be financed by us:

(List names of Consumers and Order Nos.)

Conditional sales contracts executed by such Consumers are enclosed herewith and should be duly executed by you, together with the assignments thereof, to us. Four copies of each contract are enclosed. You may retain one (yellow copy) copy of each contract for your files,

and we would then appreciate your returning the other three copies of each contract duly executed and assigned with all possible speed so that we may in turn forward them to REA in order to obtain the funds with which to pay you the balances of the cash prices due on the financed sales. Together with such balances, we will also forward to you the balances of the prices on such other cash sales as we are able to collect. We anticipate our being able to forward all the balances due within 30 days of receipt by us of the conditional sales contracts.

Shipment on all orders is to be made to us immediately.

Very truly yours,

SCHEDULE OF PRICES ON HOVER TYPE ELECTRIC POULTRY BROODERS*

Name of Equipment	Model	Hover Area (Sq. In.)	Price per brooder in quantities shown**						
			1-4	5-9	10-24	25-49	50-99	100-149	150 or more

* Only equipment meeting REA specifications is to be listed. All brooders are to be complete and when assembled, ready to operate. Specify whether assembled. All prices to be f.o.b. project delivery point.

** Purchaser is to be allowed assorted sizes or models. For example, an order to the Blank Manufacturing Company for 1 Model A, 1 Model B, 2 Model C, and 4 Model D Brooders would entitle the purchaser (whether an individual or a group) to the prices in the 5-9 column, the unit prices in each case being listed in this column opposite the model number in the model column to the left.

Prices effective until _____.

Manufacturer _____ Signed _____
Contractor

Date _____

A SUGGESTED METHOD OF COMPARING BROODER VALUES

The brooders which meet the performance requirements, the structural specifications, and for which performance data have been submitted, are rated according to the total cost per chick during the assumed brooder life of 10 years, each brooder operating with a full load of chicks and allowing ten square inches of hover area for each chick. The total cost per chick is the sum of two factors, the fixed cost per chick and the operating cost per chick.

A. Fixed Cost

The fixed cost per chick is found by dividing the first cost of the brooder by the number of chicks that it is assumed will be brooded during its ten year life.

$$\text{Fixed cost per chick} = \frac{\text{First cost of brooder}}{\text{No. of chicks brooded in 10 years}}$$

The number of chicks brooded in ten years is the product of the brooder capacity (10 sq. in. per chick) times the number of broods raised in a season times 10. It is assumed that the typical farmer will raise one brood of chicks each year and that the typical broiler raiser will raise three broods a year with each brooder. For example, in the case of a farmer-owned 3,500 sq. in. brooder, costing $35.00, the prorata first cost of the brooder would amount to 1¢ per chick, as compared with 1/3¢ per chick for the broiler raiser (3 broods per year.)

B. Operating Cost

Operating cost per chick is not an absolute but rather a relative or comparative value. It is the product of three factors (efficiency ratio, average energy consumption, and cost per kilowatt hour) which are enumerated and explained below.

(a) Efficiency Ratio.

To determine the operating cost of brooders and set a definite value thereon, the following formulae are used:

$$\text{With Chicks; Efficiency Ratio} = \frac{\text{Watt-hours per 100 sq. in. per 24 hours}}{350^*}$$

$$\text{Without Chicks; Efficiency Ratio} = \frac{\text{Watt-hours per 100 sq. in. per 24 hours}}{450^*}$$

For example, if test data show an energy consumption with chicks of 300 watt-hours per 100 sq. in. per 24 hours, the efficiency ratio $= \frac{300}{350} = .86$ (approximately)

(b) KWH required to brood one chick for one season.

3/4 KWH is selected as an average figure.

* Test data indicates that a well-built electric brooder should not exceed these figures in watt-hour consumption.

(c) Cost of Electricity

A cost of 3 cents per KWH is assumed for the farmer, and of 2 cents per KWH for the broiler raiser.

(d) Operating cost per chick will not be the same for the farmer and the broiler raiser and is computed separately.

Operating Cost per chick (farmer) = Efficiency Ratio x 3/4 KWH x 3¢

Operating Cost per chick (broiler raiser) = Efficiency Ratio x 3/4 KWH x 2¢

For example, with an efficiency ratio of .86 (obtained by tests either "with chicks" or "without chicks") the operating cost per chick for a farmer = .86 x 3/4 x 3 = 1.93¢ per chick (approximately.)

C. Total Cost

The total cost per chick is computed for both broiler raiser and farmer by adding the operating and fixed costs per chick in each case. For example, in the case cited under Section "A" above, the fixed cost for the farmer was 1¢ per chick which added to the operating cost for the farmer in the example of section "B" (item "d") or 1.93¢ gives us a total of 2.93¢ per chick.

Suggested BROODER EVALUATION SCHEDULE *

Model	Hover area sq. ins.	Operating cost per chick		Fixed cost per chick		Total cost per chick	
		Farmer	Broiler raiser	Farmer	Broiler raiser	Farmer	Broiler raiser

* A brooder life of 10 years is assumed. Data taken from "Guaranteed Operating Performance" charts, pages 25-27. See also pages 48 and 49.

ADVANTAGES OF ELECTRIC BROODERS

LINDA DAVIES V. GERMANIA

APPENDIX III (pages 51-53)

SALES POINTS & GOOD SENSE

ON

ELECTRIC BROODER ADVANTAGES

Electric Brooding is Cheaper, Easier, Safer, Cleaner, Healthier, -- No fire hazard. Don't be satisfied with less than the best, especially when it costs no more, reduces labor and fire hazard, and increases net income -- spendable cash.

Where electricity has been available for some time at the moderate rates now commonly found on cooperative high-lines, electric brooding is growing by leaps and bounds. On the Pacific Coast where electricity has been available for a longer time, other types of brooders in use are often as hard to find as horses and buggies.

A check-up on the sales of brooders by one of the large power companies in Ohio shows that 75% of all the brooders being installed are electric. Present indications are that the proportion of electric brooders sold in many REA territories will reach 90% before long; it has already reached this figure in some instances.

Users of electric brooders and Agricultural Experiment Station Workers have found that the electric brooder has a number of advantages over brooders using other types of heat. Some of these advantages--of varying degrees of importance--are: (1) Distinct saving in labor due to automatic control, and no handling of fuel or ashes; (2) Reliable automatic heat control regardless of change in weather, (See also paragraph below.); (3) Better chicks raised

[illegible]

[illegible]

[illegible]

Electric Brooding [illegible] Butler, N. Mex. [illegible] Hutchinson. -- [illegible] like electric [illegible] be satisfied with less than the best, especially wh[illegible], reduces labor and [illegible], and increases [illegible] expendable cash.

Where electricity [illegible] available [illegible] some time [illegible] the moderate rates now [illegible] and on cooperative high-lines, electric brooding [illegible] and bounds. On the Pacific Coast where electricity has been available for a longer time, other types of brooders in use are [illegible] hard to find as horses and [illegible].

A check-up on the sales of brooders by one of the large power companies in Ohio shows that 75% of all the brooders being installed are electric. Present indications are that the proportion [illegible] electric brooders [illegible] before long [illegible].

Users of electric brooders and Agricultural Experiment [illegible] advantages over brooders using other types of heat. Some of these advantages-- [illegible] (1) [illegible] saving in labor due to automatic control, and no handling of fuel or ashes; (2) Reliable automatic heat control regardless of change in weather, (See also paragraph below.); (3) Better chicks raised

with less mortality; (4) Heavier growth at a given age of development; (5) Promotes earlier and better feathering of chicks; (6) Electric heat does not use up the oxygen of the air, or give off fumes; (7) There is no fire hazard; (8) With electricity at 3¢ per kwh., it compares very favorably with other heat, (see last paragraph.)

It is not necessary or desirable to have auxiliary heat in the brooder house. A cool room also reduces the likelihood of trouble with coccidiosis. Chickens have been successfully brooded without auxiliary heat in open front houses with temperatures at 30 degrees F. below zero and lower. However, the brooder house should have a good roof and particularly during cold weather, be draft-proof on three sides. A warm floor is also desirable. In cold areas, many place a wooden portable floor of matched lumber under the brooder itself. Later in the season when fires in other types of brooders tend to go out, or else over-heat the chicks, electricity is always just right and costs almost nothing.

The comparative energy consumption of any electric brooder should be considered when a selection is being made. A number of things affect the operating cost, per chick season, of electric brooders. The more important factors are: (1) Design and construction of the brooder with emphasis upon insulation, ventilation and curtains, (Don't buy a poorly constructed brooder or operating costs will almost certainly be prohibitive if the weather gets really cold; and often during cold weather the cheaper built brooders will not maintain proper temperatures); (2) Time of year (outside temperature), hover temperature, and length of brooding season; (3) Brooder house -- should be well ventilated, whether floor is single or double and free

with been noted: (b) [illegible] on age of develop-
ment; (c) Promotes [illegible] (d) Eli-
[illegible] does not [illegible] the [illegible] tween:
(e) There is no [illegible] electricity [illegible] per kwh. (a
[illegible] very [illegible] ably [illegible] see last paragraph.)

It is not necessary or desirable to have auxiliary heat in
the brooder house. [illegible] reduces the likelihood of trouble
with coccidiosis. Chicks have been successfully brooded without
auxiliary heat in open [illegible] houses with temperatures as low as fourteen
[illegible] below zero and lower. [illegible] house should be fire
proof and preferably [illegible] weather, be draft proof
[illegible] sides. A very [illegible] wooden floor, not
[illegible] wooden ground [illegible] and a [illegible]
[illegible]. [illegible] tend to [illegible] out, or close [illegible] of [illegible]. Adequate [illegible]
[illegible] right and [illegible] shown in [illegible].

[illegible] when a selection is being made. [illegible]
[illegible] operating [illegible] thick [illegible], or
[illegible] important [illegible]: (1) Death [illegible]
[illegible] (2) [illegible] fully [illegible]
[illegible] proper temperature; (4) The [illegible] (ventilation [illegible]),
power requirements, and length of production [illegible]; (5) Ease of care --
should be well [illegible], [illegible] floor [illegible] double and free

from drafts, (one common method of providing at least part of the ventilation is to have open slots at the ceiling in the front of the house, keeping them permanently open regardless of how low the temperature falls); (4) Number of chicks brooded, and mortality, (Many authorities state that 300 chicks is the largest practical unit); (5) Electric rates; (6) The poultryman himself (management may make the difference between success and failure).

Records gathered from throughout the U. S. A. show that the average consumption of electricity for electric brooding varies from $\frac{1}{4}$ to $1\frac{1}{2}$ kwh per chick season, depending on the factors mentioned above. Purdue's most recent (past season) average figures for the entire State of Indiana show .51 kwh per chick season, or about 150 kwh per brood of 300 chicks. We have individual records showing very low consumptions, for example: Mr. Louis Tangerman of St. Marys, Ohio, brooded 1,200 chicks during the late spring --4 electric brooders -- with an average of only 1/5 kwh per chick, and very low mortality. This was Mr. Tangerman's first experience with electric brooders. Again, a man at Wellington, Ohio, had a bill of less than $7.00 for the month of January as compared to his two year average of $20.00 per month for two other type brooders, before they were replaced with electrics.

In general, with electricity at 4.5¢ per kwh, good electric brooders will have operating costs comparable to coal at $12 to $13 per ton, wood at $4.00 per cord and oil at 9¢ per gallon. Late in the season, when other fuels are particularly difficult to handle, electricity at 7 or 8 cents is no more expensive. Considering the entire season, the average fuel saving, as compared to other methods, is $3 to $5 per brood.

OPERATING SUGGESTIONS

FOR

ELECTRIC BROODERS

APPENDIX IV - (Pages 54-57)

SUGGESTIONS ON CARE AND OPERATION OF ELECTRIC BROODERS *

1. The time to start the brooder depends on the area and the farmers' needs. Advice on brooding and other matters will be gladly given by the County Agent, State Extension Specialists, Agricultural College or Experiment Station. Ask your County Agent and he will offer suggestions.

2. The brooder house should be airtight on three sides but the front can well be open. In fact it is very essential that there be ample ventilation openings, at least somewhere near the roof, at the front of the house, so that as much as possible of the moisture will escape instead of condensing on the walls and litter. Lining the back wall and sides with building paper will stop drafts through cracks.

3. For the lighter breeds a minimum of about 115 sq. inches (Va. Exp. station specifications for example) of brooder house floor area should be available per chick, where there is no outside runway, but as the season advances so that broods can be allowed outside the floor area can safely be reduced to 75 sq. inches.

4. At least for cold weather brooding an auxiliary floor should be placed beneath the brooder, whether the regular floor is concrete, wood or dirt, so as to prevent excessive condensation of moisture. A common practice is to make up a sub-floor of matched boards, with cross pieces of 1" boards tying it together on the underside, of such size that it extends at least 6" to 12" beyond the edge of the canopy. If the brooder house floor is above the ground the sides of the building should be banked so that the wind will not blow underneath.

5. For winter brooding or where the chicks can't get outside the brooder house, the capacity of a brooder for the light breeds should be based on an allowance of at least 10 sq. inches per chick and better still 12 sq. inches. The heavier breeds should be allowed 12 to 14 sq. inches. In warmer weather 7 sq. inches is probably satisfactory for the lighter breeds but where as little as this is allowed for colder weather brooding part of the chicks should later be removed - say at 4 weeks when many remove the cockrels. Provide poults with at least twice the space recommended for the lighter breeds of chickens.

*Some of this material will be of interest to the brooder committee and can be used in whatever way they find most helpful.

6. In real cold weather 4 to 6 inches of litter are recommended but if it is stirred up every day or so, especially as the chicks get older, the stirring should be limited to the upper inch or two. However in addition some experiment stations feel that turning the litter upside down every week or 10 days helps to control coccidiosis.

   During the first few days the litter had best be covered with paper, especially if sand or other readily eaten material is used. Many and varied kinds of litter such as chopped straw, chopped or shredded corn fodder, peat moss, sugar cane residue and shavings are being successfully used.

7. At least 24 hours before the chicks arrive put the brooder in operation, setting the temperature as directed by the manufacturer for day old chicks; if directions not supplied, at 100°F. 2½" from the floor and under the hover at a distance of at least 6" from the outside edge.

8. After the chicks are placed under the brooder adjust the temperature so that the chickens scatter evenly under the hover. If the chickens cluster near the center, the temperature is too low and vice versa; if on one side there is a draft blowing, it should be stopped at once. The curtain at first should be within ½ to 1" of the floor or litter. As the chicks grow, the hover should be raised and at the end of the season - while heat is still necessary - it is sometimes necessary, with unwisely crowded brooders, to raise the hover as much as 6" to 12", or even more. With some types of brooders having ample head room the curtain instead of the brooder is raised to meet age requirements.

9. During the first few days the chickens should be confined rather closely to the hover. In real cold weather the wind-proof fence (cardboard, sold at little cost by some feed companies or dealers; 1" x 12" boards; or band of sheet metal) should be as close as possible and still allow the feeders to stick part way out from under the hover. Having the fountains next to the hover will keep the water from freezing without the use of water warmers in most areas. Each day the fence can be moved back a bit until within say 5 days (regardless of how cold it is) the feeders are clear outside the hover. At first a considerable portion of the eating will be done under the hover because of the attraction light. For the first few days it may be necessary to replace the red attraction light under the brooder with a white bulb of small wattage. The red light is used to reduce the likelihood of cannibalism, and prevent eating of the insulation used by some manufacturers. Many manufacturers use white bulbs of small wattage for attraction lamps, instead of the red ones mentioned.

10. As the chicks get older the temperature of the brooder should be lowered (about 5 degrees F. per week) so that they will be entirely weaned from

heat at 6 or in real cold weather at 8 weeks. Never supply heat to chickens after they have reached the age of 10 weeks regardless of weather extremes. An easy way to do this is to slip a roosting unit consisting of roosts securely nailed to a framework covered with poultry netting (so as to keep the chickens away from their droppings) under the brooder at a chick age of say 4 or 5 weeks and then the chicks will soon be roosting. These roosts can be hinged to the back wall of the brooder house and thus be out of the way until needed. If the brooder is not hung so as to be raised by a counterweight it can be set directly on the roosts, or on supports which in turn rest on the roosts.

Early weaning from heat is of extreme importance as it will greatly reduce operating costs and eliminate night crowding with its danger of losses and almost inevitable "slow down" in the rate of growth that would otherwise be achieved. Such a roost will greatly simplify the sanitation problems as there will be no need of cleaning the roosting area until the chicks are sold and of course there is no moisture problem and much less likelihood of coccidiosis with the roosting area screened.

11. After the first few days the floor area immediately around and under the waterers and feeders should be covered with 3/4" hardware cloth on a frame of 1" x 4", preferably with cross members every 3'.

12. Many keep a light on all night in the brooder house but this is a matter that is entirely optional. However a light is particularly helpful in preventing crowding of turkey poults (or older chicks) and stampedes among ducks or geese. It is likewise helpful when the brooder is overcrowded as some of the chicks are then always out eating.

13. The chickens do even better when absolutely no supplemental heat is used.

14. As the cooperative's operating experience increases, the likelihood and also severity of service interruptions should rapidly decrease, but when they do occur a well insulated brooder will ordinarily take care of the chicks, even when they are small and the weather cold, for at least 2 to 4 hours with little or no attention. However in any such emergency the chicks should be watched and there will then be no need for chick losses. By closing ventilators and dropping the hover closer to the floor, heat losses can be greatly reduced. In some cases sacks are draped over the outside edge of the brooder. In cases of prolonged interruptions of your electric service the heat furnished under the brooder by the chicks themselves can be supplemented by a

jug of hot water, or an ordinary lantern if the brooder has sufficient clearance underneath. Proper care will ordinarily handle such situations indefinitely.

Places to Get Information on Brooding

1. Your County Agent
2. Your State Extension Service Bulletins on Electric Brooding.
3. And we might cite as other examples:
   (a) "Brooding Chicks under Electric Hovers," Cornell Ext. Bul. 366 (1937), Ithaca, N. Y.
   (b) "Chick Brooding & Rearing," Oregon Ext. Bul. 497 (1937), Corvallis, Oregon.
   (c) "Electric Brooders," Del. Ext. Bul. 28 (1938), Newark, Del.
   (d) "Electric Brooders on Indiana Farms," Circular 187 (1936), Purdue University, Lafayette, Ind.
   (e) "Electric Brooding of Chix," New Hampshire Agr. Exp. Station Bul. 303 (1938), Durham, N. H.
   (f) "Indiana Poultry Blue Book," (Write Purdue)
   (g) "Poultry Brooding Systems," Pa. Exp. Bul. 340 (1937), State College, Pa.
   (h) "Tests of Chick Brooders," Va. Agr. Exp. Station Bul. 306 (1936), Blacksburg, Va.

   The above Bulletins are typical of a long list of quite similar publications which are available from our Experiment Stations and Agricultural Colleges.

EXPERIMENT STATION REPORTS

ON

ELECTRIC BROODING

APPENDIX V

Quotations from some typical State Bulletins on Electric Brooding

The universal demand for labor saving devices which are automatically controlled has resulted in the adoption by many farmers of brooders heated by electricity. Statistics indicate that at least five thousand of these units were in use in California in 1926. (Bulletin 441, Agrl., Exp. Stn., Berkeley, Calif.)

Electric hovers, as a source of heat for brooding chicks, are no longer a novelty on Indiana farms and their use is increasing as electric lines are extended to farms throughout the state. Convenience and the saving of time and labor effected by the electric brooder are partly responsible for this spread. (Cir. No. 187 (Revised), Purdue Agrl. Exp. Stn., Lafayette, Ind.)

Electric brooding is practical and can be carried on under very severe climatic conditions without auxiliary heat or excessive mortality. (Agrl. Exp. Stn. Bul. #303, Univ. of N. H., Durham, N. H.)

From all reports, it appears that with properly designed equipment and proper management, the brooding of chicks under electric hovers is practical and economical. (Cornell Ext. Bulletin #366, N. Y. State College of Agr. at Cornell Univ., Ithaca, N. Y.)

Electric Brooder Purchases

May Be Financed

Details on Procedure are enclosed (Appendix II)

If not clear, write at once

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The REA Utilization Representative
will gladly answer any questions and if
you desire explain the simple, low-cost
procedure further.

U.S. Rural electrification adm
A campaignefor more electric
brooders in your own community.